



DEPARTMENT OF FORESTRY

Implementation Plan

**on treatment of exhausted natural forest
and production forest establishment project
in Da Teh District, Lam Dong Province**

Book 9-3: IP Lam Dong

THE DEVELOPMENT STUDY ON CAPACITY BUILDING
FOR PREPARING FEASIBILITY STUDIES AND IMPLEMENTATION PLANS
FOR AFFORESTATION PROJECTS IN THE SOCIALIST REPUBLIC OF VIETNAM
---FICAB---

Preface

“Implementation Plan on Treatment of Exhausted Natural Forest and Production Forest Establishment Project in Da Teh District, Lam Dong Province (Book 9-3: IP Lam Dong)” is part of the training package prepared under the development study on capacity building for preparing feasibility studies (F/S) and implementation plans (IP) for afforestation projects in the Socialist Republic of Vietnam (hereafter referred to as “FICAB”).

The immediate objective of FICAB is to strengthen capacities for the preparation of afforestation projects through practical On-the-Job-Training (OJT), seminars and workshops. Five provinces have been selected as targeted provinces for FICAB (Thai Nguyen, Son La, Quang Nam, Lam Dong and Long An Provinces).

FICAB was divided into two phases. Phase I was to prepare Model F/S and IP as well as other training materials in Thai Nguyen, a Core Province (CoP). The second phase was to implement technical training for staff members of four other provinces as Participating Provinces (PPs), i.e. Son La, Quang Nam, Lam Dong, and Long An Provinces. The training was implemented using Model F/S, IP and other training materials.

Through conducting FICAB, four forms of output are to be generated. The first is an enhanced capacity for MARD personnel. Selected staff members of MARD develop administrative and coordination capacity for supervising the quality of F/S and IP. The second is an enhanced capacity for CoP and PPs personnel. Selected staff members of CoP and PPs enhance the capacity for preparing F/Ss and IPs. The third is the development of a monitoring and evaluation method for the technical training for preparation of F/S and IP. The fourth is the development of a training package for conducting the technical training for preparing F/S and IP for afforestation projects.

The training package is prepared as one of the four above forms of output of the FICAB. The entire training package comprises the following nine (9) books:

Book 1: Training plan

Book 2: Manual for preparation of feasibility study reports for production forest / agroforestry development projects in Vietnam

Book 3: Manual for preparation of implementation plans for production forest / agroforestry development projects in Vietnam

Book 4: Model F/S of Thai Nguyen Province

Book 5: Model IP of Thai Nguyen Province

Book 6: Monitoring and evaluation report on technical training of PPs

Book 7: Market trend reference book on wood-based and agroforestry products

Book 8: F/S reports of Son La, Quang Nam, Lam Dong and Long An Provinces

Book 9: IPs of Son La, Quang Nam, Lam Dong and Long An Provinces

‘Book 9-3’ was prepared by the Provincial Study Team of Lam Dong Province under the guidance of local consultant engineers.

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Abbreviations and Acronyms

5MHRP	Five Million Hectare Reforestation Programme
ASEAN	Association of Southeast Asian Nations
B/C ratio	Cost-Benefit ratio
CoP	Core Province
CCM	Communal Consultation Meeting
DARD	Provincial Department of Agriculture and Rural Development
DoF	Department of Forestry
DOF	Department of Finance
DPI	Department of Planning and Investment
EIRR	Economic Internal Rate of Return
FAO	Food and Agriculture Organization of the United Nations
FICAB	The Development Study on Capacity Building for Preparing Feasibility Studies and Implementation Plans for Afforestation Projects in the Socialist Republic of Vietnam
F/S	Feasibility Study
FIPI	Forest Inventory and Planning Institute
FIRR	Financial Internal Rate of Return
FSDP	Forest Sector Development Program
GOV	Government of Vietnam
IA	Implementing Agency
IP	Implementation Plan
IRR	Internal Rate of Return
JICA	Japan International Cooperation Agency
JST	JICA Study Team
LUR	Land Use Right
LUC	Land Use Right Certificate
MARD	Ministry of Agriculture and Rural Development
MPI	Ministry of Planning and Investment
NPV	Net Present Value
PAM	WFP's Programme Alimentaire Mondial
PC	People's Committee
PFA	Production Forest Association
PFD	Production Forest Development
PFEP	Production Forest Establishment Project
PIP	Project Implementation Plan
PIU	Project Implementation Unit
PMB	Project Management Board
PMME	Project Management, Monitoring and Evaluation
PPs	Participating Provinces
PST	Provincial Study Team
RRA	Rapid Rural Appraisal
SFE	State Forest Enterprise
SFFD	Support for Production Forest Development
SOE	State of Environment
Sub-DoF	Sub-Department of Forestry at province level
WTO	World Trade Organization

Summary

Part I Summary of the project

In this part, in order to clarify contents of the project which is targeted at implementation planning, among the content of F/S report, project location and area, project objectives, project outputs, project components, main activity plan and project cost are summarized, and PDM which shows the project framework, is attached.

Part II Implementation Plan in Respective Field

Chapter 1 Institutional arrangement

The project organizational structure is set up with three groups namely implementing group, management group and supporting group. As anagement group, Lam Dong PPC is the supervising authority of Da Teh forest enterprise, Lam Dong DARD/Sub-DoF provides technical support, and Da Teh DPC disseminates information in order to promote farmers to participate the project. Da Teh forest enterprise implements the project as implementing agency. Five staffs of the enterprise are nominated as the project staff. As supporting group, Lam Dong Agriculture Bank supports Da Teh forest enterprise on financial aspect.

Chapter 2 Implementation schedule

Project assistance period is eight years from 2007 to 2014. In the first year, which is regarded as a preparation period, the preparation works for conducting afforestation activities is carried out. The monthly implementation schedule during the preparation period is shown in four steps from step 1: establishment of a loan scheme to step 4: establishment of strategic partnership. During the operation period from the second to the eighth year, a series of afforestation activities in a model rotation cycle, which are composed 13 steps, is repeatedly undertaken in the respective planting sites.

Chapter 3 Financial management arrangement

The project is financed with two different sources, which are loan from Lam Dong Agriculture Bank and self-capital of Da Teh forest enterprise. Da The forest enterprise directly borrow fund from Lam Dong Agriculture Bank following existing regulations and policies of the bank. Detailed procedures are defined based on the loan procedures instruction issued by the bank. Lam Dong PPC help the Da Teh forest enterprise in negotiating and preparing loan contract. Financial report is prepared by the enterprise monthly, quarterly, and annually. As for expenditure on self-capital of the enterprise, budgetary procedure is followed existing regulations of the enterprise.

Chapter 4 Procurement arrangement

In project, goods to be procured are fertilizer, insecticide, planting materials, and office equipment. The procurement should follow the government regulations and procedures. The enterprise requests suppliers to send quotations with quality, and delivery schedule. Based on price comparison, the enterprise selects best supplier. The enterprise is responsible for the entire procurement process such as planning, selecting supplier, placing order, and checking goods quality and so on.

Chapter 5 Sales and marketing

According to project implementation plan, from year 2015 onwards, Da The forest enterprise harvests 28,000 m³/year of A.hybrid timber. Part of A.hybrid timber is consumed Da Teh forest enterprise. While the majority of the harvested timber is sold to Phu Dong Joint Venture Company in Dong Nai province, which is considered the target market of the project. Between Da Teh forest enterprise and Phu Dong Joint Venture Company, nine steps on sales and marketing activities are conducted. As for respective steps, the role and functions that both parties play in connection with sales and marketing activities are examined and the results of the examination are incorporated into the table of sales and marketing flow.

Chapter 6 Training plan

Two training course are identified in order to strengthen project management capacities, which are namely i) training for Da Teh forest enterprise's staff, ii) training for farmers. As for training for the enterprise's staff, training aims to improve project management capacity as well as techniques applied in the project. Participants of the training are staffs in charge of management and execution of the project, specifically 20 heads of forest compartment. As for training for farmers, technical competency of farmers who are engaged in afforestation activities is major factors directly affecting project's performance. Farmers are trained on planting, tending, and protection techniques at the planting site.

Chapter 7 Monitoring and evaluation

Monitoring aims to check project implementation progress and to take necessary adjustment. Responsibility of monitoring including reporting is vested to the enterprise management board. Daily monitoring is under compartment staff responsibility. The four steps are set as the monitoring mechanism from data collection by forest compartment staffs to the decision-making by the director of the enterprise. The evaluation is to make recommendations for the project implementation in the future and withdraw lessons for other project, and is implemented based on results, especially achievement level of project objectives and overall objectives. An evaluation mission is established by members of third parties such as Lam Dong DARD, Agriculture Bank and so on. In order to conduct monitoring and evaluation, progress indicators and development indicators are set such as "About 1,400 ha of A.hybrid will be planted replacing exhausted natural forest by the end of project assistance period (2014)" and so on.

Introduction

“Model Implementation Plan for Treatment of Exhausted Natural Forests and Production Forestation Project in Da Teh District, Lam Dong Province (Book 9-3)” has been prepared based on the results of a feasibility study and implementation planning which were carried out from 7/2007 to 11/2007 at Da Teh district, Lam Dong province. This report has been prepared as a model Implementation Plan, which aims to be broadly applicable to the whole area of the country.

This feasibility study and implementation planning are conducted as a part of the Development Study on Capacity Building for Preparing Feasibility Studies and Implementation Plans for Afforestation Projects in the Socialist Republic of Vietnam which is agreed between the Government of Vietnam and Japan International Cooperation Agency (JICA) in December 2004.

The target project for the feasibility study and implementation planning is to convert degraded natural forest of Da The enterprise, Da Teh District, Lam Dong Province to commercial plantation forest to supply wood for processing factories in and outside Lam Dong province. The general outline of the project is as follows:

- Project management and implementation mechanism is set up by the Forest Enterprise.
- Forest plantation is undertaken by the forest enterprise.
- Converting degraded natural forest to high-yielding commercial plantation (with Acacia hybrid) in order to increase the income of forest enterprise staff/workers and local households participating in the project. Target products of the project are pulp wood and timber for plank production.
- Financial resource for forest plantation is secured from the provincial Agri-bank and DaTeh forest enterprise itself.

The provincial study team of Lam Dong province (PST) and the Forest Inventory and Planning Institute of Vietnam (FIPI) conducted the feasibility study and implementation planning under the guidance and supervision of the JICA Study Team (JST). And in process of the feasibility study and implementation planning, technology transfer from JST to FIPI and PST on feasibility study and implementation planning is executed. The PST of Lam Dong province also participated to the feasibility study. In order to enhance the capacity for preparing F/S, OJT for the provincial study team is carried out during the feasibility study and the implementation planning.

PART I: SUMMARY OF THE PROJECT

1. Project Location and Area

1.1 Location

The project area is located in the South West of Lam Dong province and 180 km from Da Lat city with the total area of 22,566 ha. The project area is under the management of DaTeh Forest Enterprise and situated in the territory of four communes of Quoc Oai, An Nhon, Trieu Hai, and Da Kho, Da Teh, Lam Dong province.

1.2 Area

The total land area of the project is 22,566.4 ha. Land classification categories in the project area are summarized in table 1 below.

Table 1 Size of area by land classification and commune

Unit: ha

Land classification	Size of area by commune				
	Da Kho	Quoc Oai	Trieu Hai	An Nhon	Total
Total area	3,841.4	8,598.0	3,219.1	6,907.9	22,566.4
1. Agricultural land	3,616.1	8,401.6	3,080.3	6,672.8	21,770.8
1.1. Forest land	1,727.0	7,028.0	1,763.0	5,559.0	16,077.0
(1) Natural forest	1,210.3	6,794.0	1,599.7	5,285.6	14,889.6
(2) Plantation	456.6	193.5	163.3	273.4	1,086.6
(3) Un-forested	60.1	42.5	0.0	0.0	102.6
1.2. Other agricultural land	1,889.1	1,373.6	1,317.3	1,113.8	5,693.8
2. Non-agricultural land	221.8	116.9	97.2	222.4	658.3
3. Un-used land	3.6	79.5	41.6	12.7	137.3

Source: Da Teh Division of Natural Resources and Environment, and results of field survey in 2006.

2. Project Objectives

2.1 Overall Goal

Forest development in a sustainable and reasonable way

Creation of attraction of investment and improvement of community life

Improvement of natural environment of the PA

Limiting slash and burn practice by

Attracting local people to involve in afforestation project

Supply timber materials to processing industry

Creation of subjective position for Da Teh enterprise in production and doing business

2.2 Project Objective

The project objective is to increase the production value of the forest lands. Harvesting of the planted trees is expected from 2015 onward.

The objective of the assistance: 1,406.7 ha of Acacia hybrid plantation will replace existing degraded forest by the end of 2014.

The target beneficiary of the project is staff and workers of Da Teh enterprise. The project area is under the management of DaTeh Forest Enterprise and situated in the territory of four communes of Quoc Oai, An Nhon, Trieu Hai, and Da Kho, Da Teh, Lam Dong province.

2.3 Project Outputs

The project objective is to be achieved through realization of the following outputs:

1. The project forest land (a total of about 1,406.7 ha) is planted with specie of commercial values;
- 2.1. A model loan scheme is established for production forest development project;
- 2.2. Attracting local people to involve in afforestation project;
- 2.3. Market linkages between Da Teh enterprise and the markets are promoted;
- 2.4. Smallholders, staff and workers of Da Teh enterprise are trained with appropriate afforestation technique and management; and
- 2.5 Institutional capacity to manage the production forest development project of Da Teh enterprise is enhanced.

3. Project Components

3.1 Project components

Based on the project objectives and design matrix, project components are specified as follow:

Component 1: Production Forest Development (PFD);

Component 2: Support for Production Forest Development (SPFD);

- 2.1. Financing Mechanism Development;
- 2.2. Canvass people to sign contract of afforestation;
- 2.3. Promotion of Market Linkages;
- 2.4. Training and Institutional Development; and
- 2.5. Project Management, Monitoring and Evaluation (PMME).

3.2 Main activity plan

Main activity plan of the project is shown as in the following planting and harvesting plans.

Table 2 Planting plan by year (species: Acacia hybrid)

Categories	2008	2009	2010	2011	2012	2013	2014	Total
Area (ha)	227.8	215.6	233.3	219.1	193.6	154.7	162.6	1,406.7

Table 3 Harvesting plan by year (species: Acacia hybrid)

Categories	Harvesting year							
	2015	2016	2017	2018	2019	2020	2021	Total
Harvest Area (ha)	227.8	215.6	233.3	219.1	193.6	154.7	162.6	1,406.7
Volume of Standing Trees(m ³)	49,466	46,500	50,400	46,634	41,911	33,573	33,879	302,363
Volume of Commercial wood (m ³)	32,311	30,259	34,308	30,800	27,863	23,493	23,248	202,282

Table 4 Plan for construction and upgrading infrastructure

No.	Year	Watch-towers	Construction and upgrading roads (m)
1	2008	3	3,350
2	2009	3	3,240
3	2010	4	1,560
4	2011	4	3,740
5	2012	4	5,590
6	2013	4	2,600
7	2014	4	3,420
8	2015	4	
9	2016	4	
10	2017	4	
11	2018	4	
12	2019	4	
13	2020	3	
14	2021	2	
Total		51	23,500

4. Project Cost

Project cost is calculated for one business cycle. Total project cost including physical contingency and price contingency, is estimated at about VND 100 billion.

The entire project cost is calculated for Production Forest Development component. To support the management and operation of Da Teh enterprise during the project implementation, costs to implement activities under the “Support for Production Forest Development” component are not separated but allocated to direct and indirect forest planting costs, specifically as follows:

- (1) Cost for sub-component: 2.1 Financing Mechanism Development; 2.2 Canvass people to sign contract of afforestation; 2.3 Promotion of Market Linkages; 2.5. Project Management, Monitoring and Evaluation; costs for compilation, and printing of training materials, and remuneration for trainers (at the headquarter of forest enterprise) are charged to project management costs (sub-component 2.4.).
- (2) Costs for in-field training on planting and tending techniques, mainly consisting of labour cost are charged to direct costs as payment for planting labour (sub-component 2.4.).

Project costs are summarised in table 5 below.

Table 5 Summary of project cost

Unit: VND

Project Component	Self-own capital	Bank	Total cost	Ratio
1. Production Forest Development	48,626,359,440	19,223,235,014	67,849,594,454	67.86
1.1. Direct cost	23,905,319,130	16,642,134,040	40,547,453,170	40.55
1.1.1. Planting, tending and protection costs	0	16,642,134,040	16,642,134,040	16.64
1.1.2. Harvesting cost	23,905,319,130	0	23,905,319,130	23.91
1.2. Indirect cost	4,372,787,245	2,581,100,974	6,953,888,219	6.95
1.2.1. Management fee (6,5% x Direct cost)	2,635,584,456	0	2,635,584,456	2.64
1.2.2. VAT (10% x value predicted before tax)	1,737,202,789	2,581,100,974	4,318,303,763	4.32
1.3. Other cost	395,600,291	0	395,600,291	0.40
1.4. Interest payment to the bank	19,952,652,775	0	19,952,652,775	19.96
2. Support for production forest development	0	0	0	0
A) Total baseline cost (1+2)	48,626,359,440	19,223,235,014	67,848,094,912	67.86
B) Physical contingency	2,394,847,084	0	2,394,847,084	2.40
C) Price contingency	29,740,500,262	0	29,740,500,262	29.74
Total cost (A + B + C)	80,761,706,786	19,223,235,014	99,984,941,800	100.00

5. Project Design Matrix

Project Name: Treatment of Exhausted Natural Forests and Production Forestation Project in Da Teh District, Lam Dong Province.

Project Area: Quoc Oai, An Nhon, Trieu Hai, and Da Kho Communes, Da Teh district, Lam Dong province.

Assistance Period: 2008-2014

Project period: 2008-2021

Target Beneficiary: Staff and workers of Da Teh enterprise

Table 6 Project Design Matrix

Narrative Summary	Indicators	Means of Verification	Critical Assumptions
Overall Goal Sustainable development, attracting investment, and improving community living	Implementing economic development orientation for southern part of Lam Dong province – converting 15,000 ha of degraded natural forest into high-yielding production forest. Creating 3.4 million man-days locally	Province's Forestry development orientations for the period 2006-2010; Statistics of wood consumption in the province.	MARD maintains existing policy and criteria for handling degraded forest, which has been used recently. These criteria have been institutionalized by Circular 99/2006/TT/BNN dated 6/11/2006, which is widely applied in forestry production.
Project Objective To increase economic efficiency of forest land use	Around 28,800 m3 (commercial wood) is harvested each year from 2015 onward.	Records of Provincial Department of Forest Protection	Payment is promptly done as agreed between smallholders and buyers.
Objective of Assistance To plant commercial forest on degraded natural forest in the project area	By 2014 about 1,406.7 ha of Acacia hybrid plantation is established	Reported data on project implementation	No forest fire, no pest and disease. Weather stable; Price and consumption market are stable.
Outputs 1. The production forest land is planted with species of commercial values; 2.1. A model loan scheme is established for production forest development projects; 2.2. Attracting local people to involve in afforestation project; 2.3. Market linkages between Da Teh enterprise and the markets are promoted; 2.4. Smallholders, staff and workers of Da Teh enterprise are trained with appropriate afforestation technique and management; 2.5. Institutional capacity to manage the production forest development project of Da Teh enterprise is	1. Forestry plantation area (around 1,406.7 ha) are planted with Acacia species by 2014; 2.1. Da Teh enterprise start getting institutional loans by 2008; 2.2. By 2008, labour contract between the Forest enterprise and local farmers is signed; 2.3. A harvest and marketing plan is prepared by 2014; 2.4. About 8 training courses will be offered to participating smallholders, staff and workers of Da Teh enterprise; 2.5. By the end of 2007, the organisational structure for	Reported data on project implementation	Labour cost and material price are stable. People's enthusiasm and local authority's support. Resources and capacity of forest owners are mobilized and uphold

enhanced.	project implementation is set up by the forest enterprise.		
Activities 1. Updating project implementation plan 2.1. Implementing financial procedures on getting loan 2.2. Mobilizing local people to forest planting activities and signing forest planting contract. 2.3. Market linkages between Da Teh enterprise and the markets are promoted. 2.4. Training local people, staff and workers of Da Teh enterprise on appropriate afforestation technique and management 2.5. Setting up organizational structure for project implementation	Inputs - Total cost for the entire model of commercial forest plantation is VND 100 billion (bank interest, physical, and price contingencies are calculated) - Planting are: 1,406.7ha - Total man-days : 758.457 man-days Average annual labour demand: 572 laborers	- Trained farmer sign planting contracts - Loan procedures are not delayed	
		Prerequisites	
		-The PPC approves the project. - VBARD has long-term loan policy according to forest plantation cycle as of the plan.	

PART II: IMPLEMENTATION PLAN IN RESPECTIVE FIELDS

I. INSTITUTIONAL ARRANGEMENT

1. Overall Implementation Structure

The project organizational structure is set up with three groups namely: (1) Management/Supporting group; (2) Implementing group; (3) Supporting group.

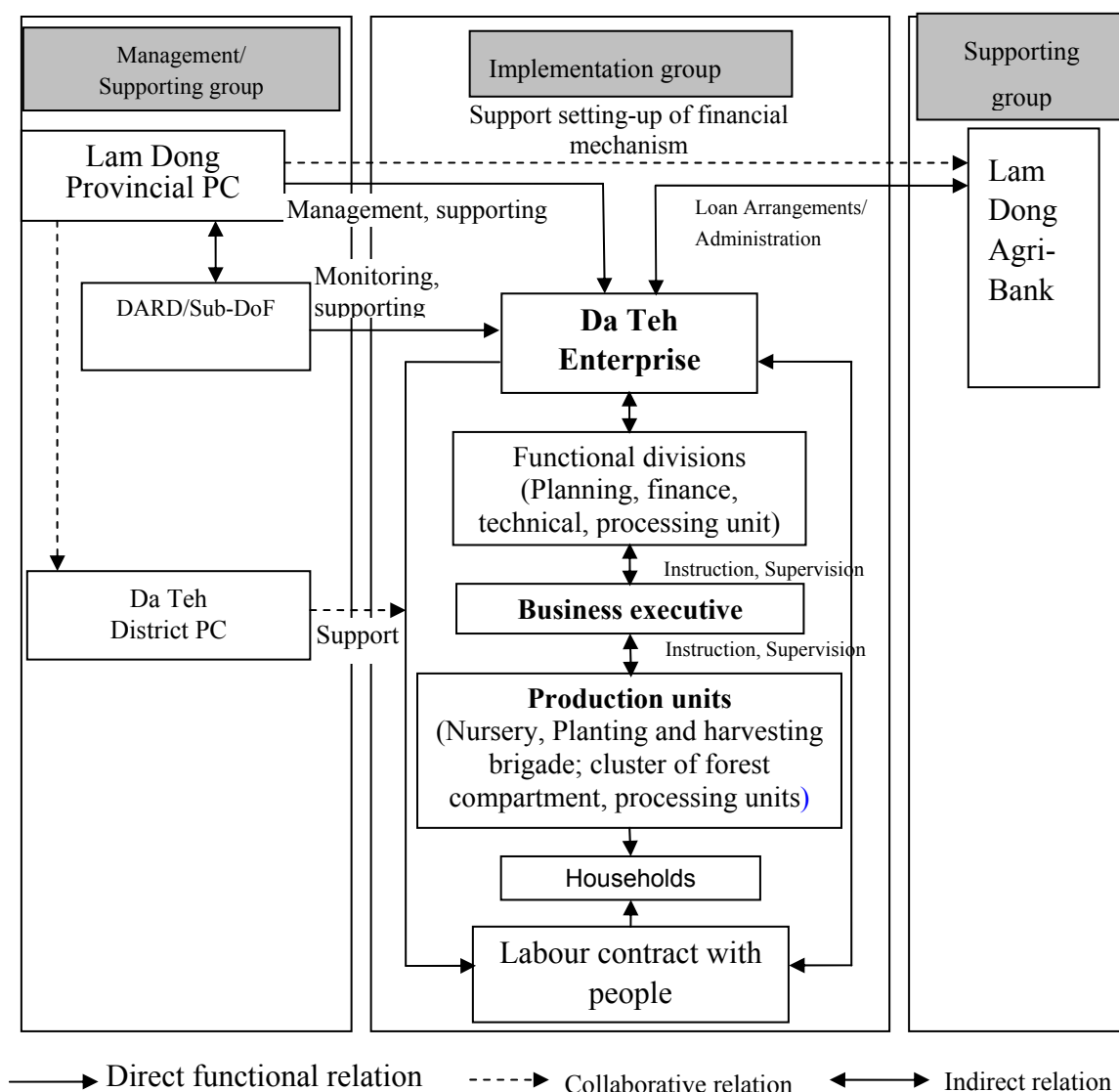
(1) Management/Supporting group: Includes state agencies and financial institutions such as Lam Dong Provincial People's Committee (PC), DARD, DaTeh District PC. Management/Supporting group plays the role of administration and professional management over the forest enterprise. AT the same time, it provides policy and technical support to project implementation.

(2) Implementing group: Da Teh forest enterprise is the investor directly involved in project activities. On the other hand, Da Teh forest enterprise is an independent business. The enterprise executes project implementation via its functional and direct implementing divisions. At the same time, it mobilizes people to participate in afforestation activities.

(3) Supporting group: Lam Dong Agri-bank supports Da Teh forest enterprise in form of loans for project implementation.

Project organizational structure is described in the chart below.

Figure 1 Structural Organization Chart for Project Implementation



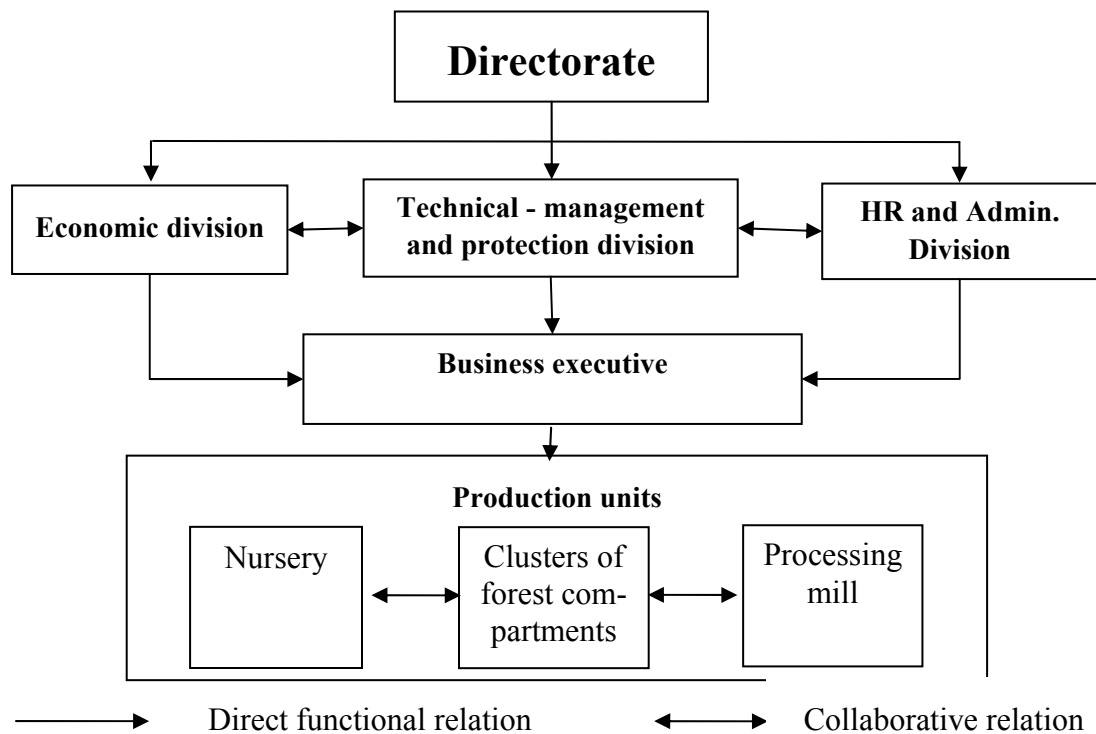
2. Implementing agency (Da Teh Enterprise)

Da Teh forest enterprise is the investor cum implementing agency. The enterprise's organizational structure is described in the following section.

2.1 Organisational structure of Da Teh forest enterprise

At present, Da Teh Enterprise organization is structured in direct functional mode. The enterprise' director is appointed by the government and be responsible for all the activities of the enterprise. Vice-director and functional divisions are to assist director in implementing and fulfilling tasks assigned. Organizational structure of DaTeh enterprise is presented in figure 2 below:

Figure 2 Da Teh Enterprise



Given the above organizational structure, roles of each function in the afforestation project are coordinated as in annex 4.

2.2 Staffing Level

The below table shows project's staffing including directorate and heads of functions.

Table 7 Proposed project staffing

Directorate	Technical-Protection and management	Human resource and Administration	Economic	Total
2 (Director and vice-director)	1 (head)	1 (head)	1 (chief accountant)	5

2.3 Overview of Tasks of Implementing Agency

Forest enterprise, as a management cum implementing agency, is directly responsible for business activities of the project. Specifically:

a) General tasks:

DaTeh enterprise is a business unit, which is directly responsible for business activities of the project as follows:

- Directly responsible for project implementation, management and monitoring as agreed between the enterprise and financial institution;

- Preparing guidelines for project implementation ensuring to set out realistic objectives;
- Preparing annual work-plan, and annual capital flow and budget;
- Preparing, updating, and implementing procurement plan for project;
- Carrying out market research, establishing strategic partnership with clients, and undertaking necessary procedures related to plantation wood consumption;
- Undertaking accounting, maintaining accounting logbook, and striking capital balance according to current regulations;
- Undertaking regular monitoring of project progress
- Undertaking mid-term and final reviews of borrowed capital flow;
- Realising other obligations as assigned by competent authorities

b) Collaboration role with other agencies:

DaTeh forest enterprise, as a project holder, has close link with agencies such as Lam Dong PPC, DARD, DaTeh district PC, and financial institutions in implementing following tasks:

- Acting as focal point connecting project activities and disseminating project information;
- Collaborating with other related agencies and main partners in all project activities;
- Provide support in silvicultural techniques to credit institution during their verification of loan application (when required);
- Setting up collaboration and management mechanism for project;
- Ensuring timely information flow to support decision making process at various levels (PC, DARD, and credit institution);
- Preparing plan/option to improving degraded forest to commercial forest to be submitted to DARD and PPC for approval;
- Completing loan formalities/procedures according to regulations by Department of Finance and Agri-bank;
- Collaborating with local district and commune authorities to directly contract people for forest planting, to provide forestry extension service, training, and raise awareness on forest management and protection according to community policy in the project area.
- Applying new regulations and policies to forest planting activities

3. Other Relevant Stakeholders

3.1 Lam Dong Provincial PC

Lam Dong PPC is the direct supervising authority of DaTeh forest enterprise. Its main roles are following:

- (i) Approving plan for converting degraded forest to commercial plantation.

- (ii) Promoting financial institutions' support to project management board (DaTeh forest enterprise) in accessing credit source with reasonable interest rate and favorable terms for forest planting
- (iii) Directing dialogues with financial institutions to establish credit scheme
- (iv) Providing overall policy instructions and orientations through Sub-DoF
- (v) Monitoring project implementation and solving problems via Sub-DoF
- (vi) Ensuring efficient liaising with related agencies and stakeholders to solve problems, this might arise during project implementation, especially those beyond the authority and control of project management board

3.2 Lam Dong DARD/Sub-DoF

This is line agency advises Lam Dong PPC, at the same time represents PPC in managing the forest enterprise technically; Provides technical support to forest enterprise, verifying plans for improving degraded forest and forest planting, policies on land and forest resource in the project area; and supervises project activities. Specifically as follows:

- (i) Advising Lam Dong PPC on policy instruction, technical guidelines for forest enterprise;
- (ii) Advising Lam Dong PPC and cooperating with DaTeh district PC in monitoring of project implementation as well as solving problems be raised;
- (iii) Reviewing and approving project annual work-plan;
- (iv) Ensuring effective communication with relevant agencies and stakeholders to solve problems that may arise during the project implementation, especially those beyond the control of project management board
- (vi) Supporting and providing information to project management board, even staff if need be
- (vii) Organizing project evaluation, this is carried out by an evaluation team.

3.3 Da Teh District PC

Dissemination, canvassing local people to participate in the project, supply information on labours.

3.4 Financial institution

Project financing institution is Lam Dong Agriculture Bank, whose main functions are:

- (i) Establishing favourable financing mechanism for project implementation, providing loans and collecting repayment;
- (ii) Undertaking fund evaluation and management;
- (iii) Cooperating with PMB to prepare short-term and medium-term action plan for monitoring project financial performance.

4. People participating in the project

As forestland in the project area is under the management of the forest enterprise, farmer households' participation is in the form of paid labour. Labour is provided for forest planting, tending, protection, management, and harvesting.

People participating in the project will be trained in necessary silvicultural techniques such as soil preparation, forest planting, tending, and harvesting. In addition, information related to their benefits, responsibilities in the project will also be provided.

II. IMPLEMENTATION SCHEDULE

1. Overall Schedule of the Project Implementation

Project assistance period will be for 8 years starting from 2007 to 2014. Overall schedule for all the related project components during the entire assistance period is summarized in the following table. The schedule may be subject to revision over the course of the project implementation.

In the first year, which is regarded as a preparation period, the preparation works for conducting afforestation activities will be carried out. During the operation period from the second to the eighth year, activities directly related to the afforestation are undertaken in the field.

Table 8 Overall Schedule of Project Implementation during the Assistance Period

Calendar Year	2007	2008	2009	2010	2011	2012	2013	2014
Implementation year	1	2	3	4	5	6	7	8
Component	Period	Preparation period	Operation period					
1. Production Forest Development								
2. Support for Production Forest Development								
2.1. Financing Mechanism Development								
2.2. Mobilizing people to sign forest planting contract								
2.3. Establishment of Strategic Partnership, Linkage with markets								
2.4. Training								
2.5. Project Management, Monitoring and Evaluation								

Activities of the two project components are arranged so that project staffs are able to implement several different tasks at the same time.

To ensure smooth planting for the entire period, preparation in the first year should be carefully undertaken. From year 2, planting activities are to be implemented in the field. In addition, it is needed to negotiate with financial institution to establish a credit scheme. This should start as soon as the project is approved.

2. Preparation period

There are four critical points in the preparation period:

- (i) Setting up project financial mechanism and loan procedures
- (ii) Setting up project management and execution structure including task assignment to functions/divisions; Signing labour contract with people; establishing strategic partnership with related provincial agencies, private organizations to ensure policy and technical support as well as to secure material supply;
- (iii) Promoting linkages with markets;
- (iv) Preparing annual work plan and budget for the entire implementation period, and preparing tools, technical manuals to be used for training and community resource mobilization.

The implementation schedule during the preparation period is shown in Table 9 below.

Table 9 Implementation schedule of preparation period

Step	Activities		Relevant Component	Months											
				1	2	3	4	5	6	7	8	9	10	11	12
1	Establishment of a Loan Scheme with a Bank		Comp 2.1												
	1.1	Negotiation with Potential Financing Agencies													
	1.2	Detailed design of Loan Service Contract													
	1.3	Establishment of Agreement													
2	Review of F/S, IP, Tools and Manuals		Comp 2.5												
	2.1	Internal meeting of the forest enterprise													
	2.2	Kick-off meeting: PPC, DPC, forest enterprise, and DARD													
	2.3	Target setting for implementation of the project													
3	Preparation Implementation/Budget Plan and Tools and Manuals		Comp 2.4 and 2.5												
	3.1	Preparation of afforestation implementing plan													
	3.2	Preparing harvest plan of degraded forest													
	3.3	Preparation of Procurement Plan													
	3.4	Preparation of Formats													
4	Establishment of Strategic Partnership		Comp 2.3												
	4.1	Identification of Strategic Partners													
	4.2	Negotiation with Strategic Partners and Promotion of Linkages with Markets													
	4.3	Establishment of Minutes of Understanding													

3. Operation period

Operation period is from 2008 until the end of 2014. This period includes series of forest planting activities according to project plan and progress as presented in the table below. During the operation period, these activities will be repeatedly carried out in the respective planting sites in order to establish production forest. Activities like labour mobilization, planting planning, technical training, site clearing, hole digging, fertilizer, tree planting will be carried out in 1st year. Activities serving project implementation such as road construction, watch tower construction will be implemented in the same year with forest planting. Tending is carried out from 1st year to 3rd year, and protection from 1st year to 7th year. Progress monitoring of the results of the afforestation activities will be conducted every year.

Table 10 Model Rotation Cycle of afforestation activities

Step	Activities	1 ha model rotation cycle						
		1 st year	2 nd year	3 rd year	4 th year	5th year	6th year	7th year
1	Community mobilization							
2	Planting design							
3	Preparation of Detail Afforestation Plan							
4	Infrastructure construction							
5	Technical training							
6	Timber Harvesting and Site Cleaning							
7	Hole digging, fertilizer application, and hole fill-up							
8	Tree planting and termite treatment							
9	Beating Up							
10	Tending							
11	Protection							
12	Preparation of annual implementation and budget plans							
13	Monitoring and Evaluation							

The focus of Step 1 Community Mobilization of the rotation cycle (Table 10 above) is four-fold and monthly schedule is shown in Table 11 below.

- 1) Reviewing to select people participating in the project: Priorities are given to those who are experienced in planting, and who live near planting sites
- 2) Labour contract: will be directly signed between the forest enterprise and laborers.
- 3) Planting group formation: after signing contract, people are grouped according to their distance from sites, and clusters of forest compartments. Heads of groups are those in charge of corresponding compartments.

Table 11 Monthly schedule of Step 1 Community mobilization

Activities	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
1.1. Selection of people participating in project												
1.2. Signing labour contract												
1.3. Grouping												

Afforestation activities of the rotation cycle from step to 11 are focused on three-fold as follows and monthly schedule of afforestation activities are shown in Table 12 below:

- 1) Preparation of Detail Afforestation Plan
- 2) Provision of smooth planting materials (seedlings and fertilizer) and
- 3) Establishment, tending and protection of plantations

Table 12 Monthly Schedule of Steps 2 to 11 afforestation related activities

Activities		Months											
		1	2	3	4	5	6	7	8	9	10	11	12
Step 2: Planting design													
Step 3: Preparation of Detail Afforestation Plan													
3.1	Logging designation for degraded natural forest in preparation for forest plantation												
3.2	Adjusting seedling production plan												
3.3	Fertilizer and termite control chemical procurement planning												
Step 4: Infrastructure construction													
Step 5: Technical training													
5.1	For forest enterprise staff												
5.2	For farmers participating in forest planting												
Step 6: Site clearing for plantation													
6.1	Vegetation clearing and wood logging (if any available)												
6.2	Burning, clearing												
Step 6: Hole digging, pre-planting fertilizer application and hole fill-up													
7.1	Hole digging												
7.2	Pre-planting fertilizer application												
7.3	Hole fill-up												
Step 8: Tree planting and termite treatment													
Step 9: Additional planting													
Step 10: Tending													
Step 11: Protection													

Monthly schedule of M&E is shown in Table 13 below.

Table 13 Monthly Schedule of M&E

Activities	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Monitoring and Evaluation												

III. FINANCIAL MANAGEMENT ARRANGEMENT

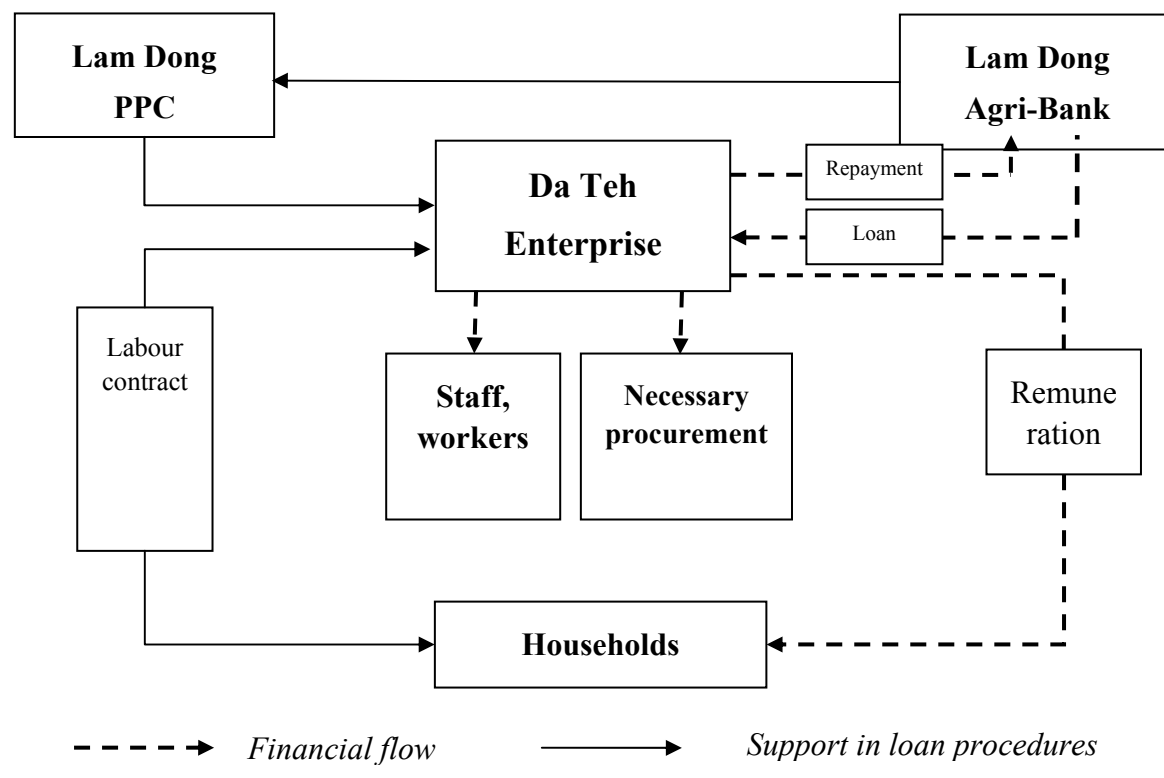
1. Financial sources

The project will be financed with two different sources: Loans and self-own capital of Da Teh Enterprise. Credit source for production forest planting has been determined from Lam Dong Agri-bank.

2. Loan for development of production forests

Loan for forest plantation is borrowed from Lam Dong Agri-bank. The forest enterprise will directly borrow from the bank following existing regulations and policies of the bank. Detailed procedures are defined based on the loan procedures instruction issued by the financial institution. Lam Dong PPC will help the forest enterprise in negotiating and preparing loan contract. Loans are managed by the forest enterprise and used to cover all costs related to production forest planting.

Figure 3 Funds Flow for Production Forest Development



Loan borrowing plan is estimated based on needs for loan and progress of planting activities. Disbursement is based on loan/credit contract between forest enterprise and the bank following existing disbursement regulations. Disbursement is according to progress

of specific contracts, workload and progress completed as per appraisal minutes of competent authorities. The forest enterprise, in cooperation with financial institution will strictly monitor project.

Table 14 Preparation for loan borrowing

Activities	Months											
	11	12	1	2	3	4	5	6	7	8	9	10
Annual Planning												
Submitting to the bank												
Appraisal												
Loan disbursement by the bank												

Financial report will be prepared by the forest enterprise monthly, quarterly, and annually. Annual reports are prepared by the end of January every year. Chief accountant of forest enterprise assumes responsibility for preparing report, which is signed by the director and submitted to competent authority. Information on disbursement and repayment are reported to forest enterprise through existing reporting system of financial institution.

According to regulations of the state audit authority, end of each year, a state auditing mission may come and audit project. Auditing can be carried out irregularly at any time of the year as needs be.

3. Forest enterprise self-own capital

Apart from loan for forest planting, main source of capital for project execution is from self-own source of Da Teh forest enterprise (accounting for 81% of total project cost). Project self-own capital includes floating capital and part of revenue from selling production forest products (from year 2015 onwards). Forest enterprise will directly manage and has full authority upon this capital source. Expenditures plan depends on needs and progress of project. Chief accountant is responsible for monitoring, recording and reporting to the director monthly, quarterly, and annually. The director approves and submits to professional competent authority.

IV. PROCUREMENT ARRANGEMENTS

1. Procurement plan

In project, goods to be procured include fertilizer, insecticide, planting materials, tools and office equipment. The forest enterprise will implement procurement locally. The procurement should follow the government regulations and procedures. Project procurement plan is presented in the table below.

Table 15 Procurement plan

Comp	Item	Item to be procured	Lot/Package for procurement	Procurement method	Responsible organization
Component 1		Fertilizer, insecticide, planting materials	One package in each year	Local shopping	Da Teh Enterprise
Component 2		Office equipment	One package	Local shopping	Da Teh Enterprise

2. Procurement flow with approval process

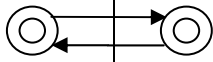
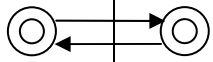
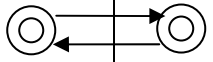
The forest enterprise requests suppliers to send quotations with description of goods quality, and delivery schedule. Based on price comparison, the forest enterprise will select the best supplier. The forest enterprise is responsible for the entire procurement process ranging from planning, selecting supplier, placing order etc. to checking goods quality.

Procurement procedures include:

- Annual detailed planning;
- Selecting supplier;
- Implement procurement contract;
- Goods delivery and quality checking.

Detailed procurement procedures are given in the table below.

Table 16 Procurement Flow

No	Expected Schedule	Action	Da Teh Enterprise	Supplier	Remarks
1	January to February	Procuring tools, equipment and materials for seedlings production			Forest enterprise (FE) estimates necessary amount of materials; Supplier consolidate total annual materials demand. Based on this amount, suppliers calculate and prepare price quotation together with quality description and delivery schedule. Forest enterprise selects best supplier. Forest enterprise confirms amount of materials to be procured with the supplier so that they can prepare. Supplier informs forest enterprise about delivery place and time. Supplier directly delivers materials to FE. FE and supplier together check quality of material.
2	June	Procuring tools, equipment and materials for forest planting			
3	November	Procuring tools, equipment and materials for watch tower construction			

V. SALES AND MARKETING

1. Overview of sales and marketing conditions

1.1. Demand and supply of forest products

At present, in Lam Dong, most of acacia timber from plantation are sold to neighboring provinces, mainly Dong Nai, Binh Duong, and HCMC, only small quantity are sold to local processing factories.

According to project implementation plan, from year 2015 onwards, harvesting volume from A.hybrid plantations of Da Teh FE averages at 28,000 m³/year (equivalent to 200 ha of acacia hybrid plantation harvested per year – see details in table 3). Part of A.hybrid timber is supplied to the processing mill of Da Teh Forest Company (this company is actually formed from DaTeh FE). The rest is mainly sold to Phu Dong joint venture. In addition, it can be sold to other clients like Minh Huy Company LTD, Thanh Vu handcraft processing unit.

Table below shows material demands of project's potential clients:

Table 17 Material demands of potential clients

No.	Clients	Material demand (m ³ /year)
1	DaTeh forest company's processing mill	5,100 – 10,000
2	Phu Dong joint venture	25,000 – 30,000
3	Minh Huy company LTD	9,000 – 10,000
4	Thanh Vu handcraft processing unit	14,400 – 18,000

It can be seen that establishment of material area for processing industry in the project area is necessary and creating opportunity for livelihood as well as environment improvement.

1.2. Price and transportation costs of forest products

Products are sold at roadside yard of the forest enterprise. The enterprise is responsible for harvesting and transporting to roadside yard, while further transporting to factory is handled by buyers, approximately around 120,000 dong/m³.

Selling price depends on timber quality and size. Selling price is calculated in the selling year. Current price (2006) sold to Phu Dong joint venture is following:

Table 18 Selling price of Acacia hybrid in 2006

Product categories	Road-side price (dong/m ³)
Grade 1 (D > 19 cm; L = 1.2 m)	552,000
Grade 2 (D = 13-19 cm; L = 2.2m)	437,000
Grade 3 (D = 6 - 12 cm; L = 2.,2 m)	230,000

Annual selling plan is given in table 3.

1.3. Target markets

Most of factories processing Acacia hybrid timber are located in other provinces, only few in Lam Dong province. Among material woods of the project, apart from those supplied to processing mill of DaTeh Forest Company, the majority of the remaining is sold to Phu Dong JV in Dong Nai. This is considered the target market of project.

2. Sales and marketing flow

2.1. Identification of stakeholders

Role and function of each partner should be considered to serve marketing strategy. To get market information, PMB is responsible to contact with whole-sale in order to select the best partner hence starting selling activities.

Based on results of feasibility in Lam Dong, two stakeholders are identified namely Seller (FE), and Buyer (Phu Dong Joint Venture). The seller is in charge of coordination such as exchanging information on timber supply and demand, negotiating contract in order to reach the final objectives set by the project. The buyer is an important partner in the marketing and considered a target market of project. The company will buy material of the FE. The buying is implemented through commitments between FE and company to assure mutual benefits of the two parties.

2.2. Sales and marketing flow

Role and functions of each party as well as their relation with other stakeholders in selling and marketing should be considered, and selling and marketing diagram be worked out.

First, to share market information among partners, FE is responsible to implement project objectives and exchange information with Phu Dong joint venture. After the last information exchange between FE and the company, the two parties will sign agreement on material supply based on information exchanged and come into sale commitment. Finally, FE delivers material, while the company does the payment. At this, sale and buy are completed. A general description of the sales and marketing flow is given as follows.

Table 19 Sales and marketing flow

No	Action	Stakeholder	FE	Target market	Potential market	Remarks
1	Review the market conditions		⊙ → ⊙	⊙		FE evaluates and updates information on supply and demand of potential market, price of wood material, conditions of target market.
2	Selling intention		⊙ → ⊙	⊙		FE announces their sell plan to users regarding area, product categories and species etc.
3	Exchanging information on wood supply and demand		⊙ ↔ ⊙	⊙		FE and material users (focal market) exchange information on wood supply/demand (specification, amount, price, venue)
4	Agreement between FE and users		⊙ ↔ ⊙	⊙		Wood users and FE agree on sell and buy terms.
5	Plantation survey		⊙ → ⊙	⊙		Wood users agree with FE to carry out field survey of planned production forest.
6	Negotiating sell and buy terms		⊙ ↔ ⊙	⊙		After surveying, users and FE agree on sell terms e.g. price, specification, quantity and wood delivery conditions.
7	Sale contract		⊙ ↔ ⊙	⊙		Sell terms agreed, contract will be signed between users and FE.
8	Harvesting and material supplying		⊙ → ⊙	⊙		Delivery is implemented according to the contract. Place of standing trees to be harvested should be informed, and wood to be transported to factory gate for users. FE will undertake field check when harvest.
9	Payment		⊙ ← ⊙	⊙		Users make payment after FE completes checking.

Note: ⊙ Indicates a stakeholder who are directly involved in actions concerned
→ Direction of action
↔ Negotiation, exchanging

VI. TRAINING PLAN

A training plan on forest planting techniques, and management is developed based on characteristics, conditions and mode of project implementation as proposed in feasibility study. In addition, it depends on project's staffing status combined with training need assessment.

Training needs are identified through consultation with community during feasibility study. According to consultation with communities, training needs mainly focus on project management, execution skills as well as forest planting techniques and protection.

During project preparation, training needs assessment was conducted. Target groups of the assessment include forest enterprise staff, people involved in project planting activities. Based on the needs assessment, two themes are identified namely (1) training forest enterprise staff; (2) training people signing forest planting contracts on plating, tending and protection techniques.

1. Forest Enterprise staff

Project management and execution skills are one of decisive factors for project's success. Such a training is highly needed for project implementation, enabling project's timely implementation according to plan.

Training aims to improve project management capacity as well as techniques applied in the project.

Participants of the training are forest enterprise staff in charge of management and execution, specifically 20 heads of forest compartment (1 course x 20 participant) as presented in the table below.

Trainers are staff of provincial DoF of Lam Dong.

2. Training plan for people

Technical competency of people involved in project's forest planting is among major factors directly affecting planting progress, plantation productivity as well as project's performance. Therefore, technical training on forest planting and tending techniques for people is indispensable to improve plantation productivity and project efficiency.

Participants of the training are people signing contracts with Đà Teh FE (7 courses x 572 participant). Details are given in table 20 below.

Trainers are technical staff of Da Teh enterprise. Farmers are trained on planting and tending techniques right at the planting site.

Table 20 Project training plan

Name	Objective	Training topics	Instructor	No. of courses	Target group	No. of participant	Duration	Time	Venue
Training for FE staff	Capacity building, training on planting, tending techniques, as well as other necessary techniques to be applied in the project	Capacity building on: - implementation organization - Techniques to be applied in the project	Staff of Lam Dong provincial DoF	1	Head of compartment	1 course x 20 participant	1 day	April	Office of FE
Training for famers	Capacity building, training on planting, tending techniques, as well as other necessary techniques to be applied in the project	Capacity building on: - implementation organization - Techniques to be applied in the project	Enterprise's technical staff	7	Those who have signed labour contract	7 courses x 572 participant	10 days	May, annually from 2008 to 2014	Project planting sites

Note: Budget for training activities is included direct and indirect costs as presented in Section 4 – Project cost (PART I - SUMMARY OF THE PROJECT)

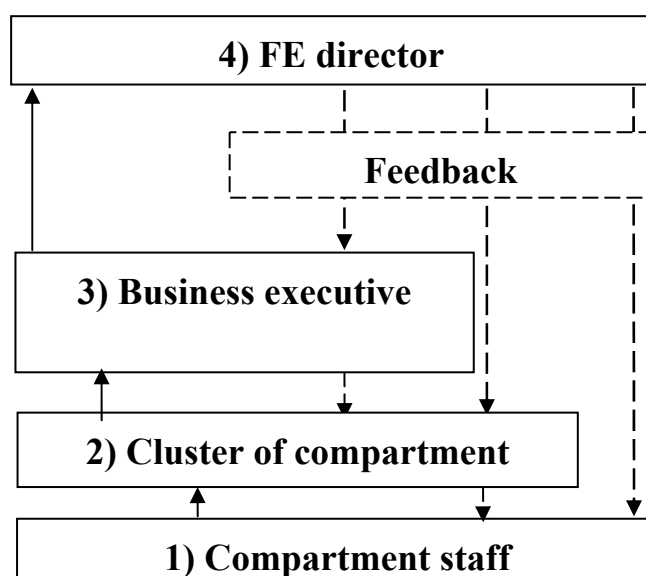
VII. MONITORING AND EVALUATION

1. Monitoring

Monitoring is to check project implementation progress and propose necessary adjustment. Monitoring responsibility including reporting is vested to the FE management board. Daily monitoring is under compartment staff responsibility.

The following figure illustrates proposed monitoring mechanism and information flow from compartment staff to management board and feedback.

Figure 4 Tentative Monitoring Mechanism and Information Flow



Note:

- 1) Compartment staffs monitor field criteria and report to corresponding cluster;
- 2) Compartment cluster check the information reported by compartment staff, consolidate and report to technical and economic divisions;
- 3) Technical and economic divisions: check information reported by compartment clusters, consolidate and further report to director;
- 4) Director directly issue feedback decision (can be in cooperation with support agencies)

Information and data collected are called implementation index. As shown in the project design matrix. Following index is designed to monitor outputs.

- (1) Forestry plantation area (around 1,406.7 ha) are planted with Acacia species by 2014 (Output 1);
- (2) By 2014, about 23.5 km of forest road is constructed (Output 1);
- (3) Da Teh enterprise start getting institutional loans by 2008 (Output 2.1);
- (4) By 2008, labour contracts between the enterprise and local farmers are signed (Output 2.2);
- (5) Harvesting and marketing plans, and purchasing agreements with traders are established by 2014 (Output 2-3);

(6) About 8 training courses will be offered to participating smallholders, staff and workers of Da Teh enterprise by 2014 (Output 2.4);

(7) By the end of 2007, organisational structure for project implementation is set up by the enterprise (Output 2.5).

2. Evaluation

The evaluation is to make recommendations for project implementation in the future and withdraw lessons. Evaluation will be implemented during or after assistance period based on results, especially achievement level of assistance objectives, project and overall objectives. With progress indicators mentioned above, following criteria will be used for project evaluation:

(1) Working on criteria for evaluating implementation assistance objectives:

The set criteria are total area of production forest planted under the project. About 1,406.7 ha of Acacia hybrid will be planted replacing exhausted natural forest by the end of project assistance period (2014).

(2) Working on criteria for evaluating implementation of project objectives:

The evaluation is carried out according to volume of wood to be harvested from year 2015. Annually, about 28,000m³ of commercial wood is harvested. At the end of a production cycle, 208,282 m³ of material wood is supplied to processing mill.

(3) Working on criteria for evaluating implementation of overall objectives:

Criteria like FE turnover, environment quality, income of farmers participating in the project, social stability, quantity and quality of processing factories' products are monitored annually after assistance period is terminated.

The evaluation requires objective view. According to plan prepared in feasibility study report, an evaluation mission consisting of members of the third parties is to be established independently from FE representing Lam Dong DARD, Agri-bank, Lam Dong Agro-forestry consulting company, and Da Teh Forest Protection Division. The table below present project monitoring and evaluation plan.

Table 21 Monitoring and Evaluation Plan

Description	Indicators	Evaluation means	Information collection			Aggregation of information			Decision making		Decisions sent for implementation	
			Collect ed by	Time	Method	Sent to	Time	Method	Person/ agency	Time	Time	Method
Overall goal	Sustainable development, attracting more investment, and improving community life	Statistics of Da Teh District and DaTeh Enterprise	Evaluation team	December, every 3 years since 2015	- Collection of data from Da Teh Enterprise and the district statistics - Interview survey	DARD	December, every 3 years since 2015	Synthesis and analysis of collected data	Provincial PC	December, every 3 years since 2015	January of the following year	Evaluation report
Project objective	Around 28,800 m3 (commercial wood) is harvested each year from 2015 onward	- Business report of the Phu Dong Company; - Statistics of District and Province	Evaluation team	December, every 3 years since 2015	-Collection of data from the Da Teh Enterprise and Phu Dong Company; - Interview survey	DARD	December, every 3 years since 2015	Synthesis and analysis of collected data	Provincial PC	December, every 3 years since 2015	January of the following year	Evaluation report
Objective of the assistance	By 2015, 1,406.7 ha of exhausted forest will be replaced by production plantation.	Project progress report	DaTeh Enterprise and Evaluation team	4th quarter in 2014	Study existing documents and directly collect data on site	Functional divisions of FE	4th quarter in 2014	Synthesis and analysis of collected data	Director of Da Teh Enterprise	4th quarter in 2014	4th quarter in 2014	Instruction from Director of Da Teh Enterprise
Output 1	Forestry plantation area (around 1,406.7 ha) are planned with Acacia hybrid;	Project progress report, report on plantation results	DaTeh Enterprise	4th quarter every year since 2008 to 2014	Study existing documents and directly measure on site	Functional divisions of FE	4th quarter every year since 2008 to 2014	Synthesis and analysis of collected data	Director of Da Teh Enterprise	4th quarter every year since 2008 to 2014	4th quarter of the same	Instruction from Director of Da Teh

Description	Indicators	Evaluation means	Information collection			Aggregation of information			Decision making		Decisions sent for implementation	
			Collect ed by	Time	Method	Sent to	Time	Method	Person/ agency	Time	Time	Method
	23.5 km of forest road is constructed by 2014										year	Enterprise
Output 2.1	Total amount of loan	Quarterly report of the financial institution	Evaluation team	3 rd quarter every year since 2008 to 2014	Data collection from bank	DaTeh Enterprise	3 rd quarter every year since 2008 to 2014	Data analysis and reporting	Director of Da Teh Enterprise	3rd quarter every year since 2008 to 2014	4th quarter of the same year	Instruction from Director of Da Teh Enterprise
Output 2.2	Number of households signed contracts with the forest enterprise	- Project progress report; - Result of Interviews	DaTeh Enterprise and Evaluation team	3rd quarter every year since 2008 to 2014	-Collection of data from the Da Teh Enterprise; - Interview survey	DaTeh Enterprise	3rd quarter every year since 2008 to 2014	Data analysis and reporting	Director of Da Teh Enterprise	3rd quarter every year since 2008 to 2014	4th quarter of the same year	Instruction from Director of Da Teh Enterprise
Output 2.3	A harvest and marketing plan is prepared.	- Result of Interviews - Harvest & marketing plan	DaTeh Enterprise and Evaluation team	End of 2014	-Collection of data from the Da Teh Enterprise and Phu Dong Company; - Interview survey	DaTeh Enterprise	End of 2014	Data analysis and reporting	Director of Da Teh Enterprise	End of 2014	End of 2014	Instruction from Director of Da Teh Enterprise

Description	Indicators	Evaluation means	Information collection			Aggregation of information			Decision making		Decisions sent for implementation	
			Collect ed by	Time	Method	Sent to	Time	Method	Person/ agency	Time	Time	Method
Output 2.4	Number of training courses conducted	Project progress report, records of trainings	Evaluation team	3rd quarter every year since 2008 to 2014	Study existing documents of the project, direct interviews with trainees on site	DaTeh Enterprise	3rd quarter every year since 2008 to 2014	Synthesis and analysis of collected data	Director of Da Teh Enterprise	3rd quarter every year since 2008 to 2014	4th quarter of the same year	Instruction from Director of Da Teh Enterprise
Output 2.5	Organisational structure for project implementation within the enterprise is set up	Decision by the enterprise's director							Director of Da Teh Enterprise	1st quarter in 2007	1st quarter in 2007	Approval issued by Director of Da Teh Enterprise

ANNEX

- ANNEX 1: Overall Plan of the Project during the Assistance Period**
- ANNEX 2: Plantation Plan**
- ANNEX 3: Silvicultural Guidelines**
- ANNEX 4: Terms of Reference for Project Staff**
- ANNEX 5: Preliminary Sample Forms**

ANNEX 1: Overall Plan of the Project during the Assistance Period

Annex 1: Overall Plan of the Project during the Assistance Period (2007-2014)

Calendar Year		2007	2008	2009	2010	2011	2012	2013	2014	Person in charge of implementation including facilitation	Principal party involved in the implementation
Implementing Year		1	2	3	4	5	6	7	8		
Activities	Expected results	Preparation period	Operation period							FE Directorate and heads of functional divisions, Evaluation team	Da Teh Enterprise, Smallholders and Evaluation team
1. Production Forest Development	1,406.7 ha of Acacia hybrid plantation will be established by the end of 2014.										
<i>1.1. Community mobilization</i>											
1.1.1. Selecting people participating in the project											
1.1.2. Signing labour contract											
1.1.3. Groups formation											
<i>1.2. Preparation of detail afforestation plan</i>											
<i>1.3. Preparation of detail afforestation plan</i>											
1.3.1. Adjusting seedling production plan											
1.3.2. Fertilizer and termite control chemicals procurement plan											
<i>1.4. Capital construction</i>											
<i>1.5. Technical training</i>											
<i>1.6. Site clearing for forest planting</i>											
<i>1.7. Hole digging, pre-planting fertilizer application, and hole-fill-up</i>											

Calendar Year		2007	2008	2009	2010	2011	2012	2013	2014	Person in charge of implementation including facilitation	Principal party involved in the implementation
Implementing Year		1	2	3	4	5	6	7	8		
Activities	Expected results	Preparation period	Operation period								
1.8. Planting and termite treatment											
1.9. Beating up											
1.10. Tending											
1.11. Protection											
1.12. Preparing annual work and budget plan											
1.13. Monitoring and Evaluation											
2. Support for Production Forest Development	To enable forest enterprise's capacity in project implementation									Da Teh Enterprise and Financial Institution	Lam Dong Province, Da Teh Enterprise Financial Institution, and partners
2.1. Implementing loan procedures	Loan for forest planting secured										Lam Dong Province, Da Teh Enterprise and Financial Institution
2.1.1 Negotiation with Potential Financing Agencies	Selecting relevant financial institutions for project										Enterprise Financial Institution
2.1.2. Detailed design of Loan Service Contract	Loan agreement for forest planting										
2.1.3. Preparing agreement	Reaching mutual benefits for the two parties										
2.1.4. Preparing annual loan plan	Annual loan plan for the bank to approve										

Calendar Year		2007	2008	2009	2010	2011	2012	2013	2014	Person in charge of implementation including facilitation	Principal party involved in the implementation
Implementing Year		1	2	3	4	5	6	7	8		
Activities	Expected results	Preparation period	Operation period								
2.1.5. Submitting to the bank	The bank approves loan plan										
2.1.6. Appraisal	The bank decides on loan disbursement										
2.1.7. Loan disbursement by the bank	Capital available for forest planting										
2.2. Mobilizing people to sign forest planting contract	Sufficient labour mobilized for forest planting									Da Teh Enterprise	Da Teh DPC and Da Teh Enterprise
2.3. Establishment of Strategic Partnership	Partners selected and market for project identified									Da Teh Enterprise	Da Teh Enterprise and partners
2.3.1. Identification of Strategic Partners	Strategic Partners selected										
2.3.2. Negotiation with Strategic Partners and Promotion of Linkages with Markets	Market information collected										
2.3.3. Establishment of Minutes of Understanding	Initial link to market established										
2.4. Training for the enterprise's staff/ workers and farmers										Da Teh Enterprise	Da Teh Enterprise and Sub-DoF
2.4.1. Training for the enterprise's staff/ workers	01 training course is conducted for the enterprise's staff/ workers										
2.4.2. Training for farmer households	07 training courses are conducted for farmer households										

Calendar Year		2007	2008	2009	2010	2011	2012	2013	2014	Person in charge of implementation including facilitation	Principal party involved in the implementation
Implementing Year		1	2	3	4	5	6	7	8		
Activities	Expected results	Preparation period	Operation period							Person in charge of implementation including facilitation	Principal party involved in the implementation
2.5. Project Management, Monitoring and Evaluation											
2.5.1. Setting up the enterprise's organizational structure for project implementation	the enterprise's organizational structure for project implementation is set up									Da Teh Enterprise	Da Teh Enterprise and PPC
2.5.2. Preparing action plans	Plans are prepared										
(1) Plan for harvest of exhausted forest										Da Teh Enterprise	Da Teh Enterprise and Sub-DoF
(2) Preparation of Procurement Plan										Da Teh Enterprise	Da Teh Enterprise and partners
(3) Sale and marketing plan										Da Teh Enterprise	Da Teh Enterprise and partners
(4) Training plan										Da Teh Enterprise	Da Teh Enterprise and Sub-DoF
2.5.3. Project Management, Monitoring and Evaluation	Project implemented as planned									Da Teh Enterprise and Evaluation team	Da Teh Enterprise and Evaluation team

ANNEX 2: Plantation Plan

Year of plantation: 2008

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
1	Quốc Oai	550	10	4	Lồ ô +IIIA1	17.8	Keo lai	32,503	2015	152	2,706	
2	Quốc Oai	550	10	1	Lồ ô +IIIA1	3.1	Keo lai	5,661	2015	137	425	870
3	Quốc Oai	550	6	4	Lồ ô +IIIA1	16.0	Keo lai	29,216	2015	137	2,192	
4	An Nhơn	551b	4	3	Keo02	12.4	Keo lai	22,642	2015	152	1,885	
5	An Nhơn	551b	4	2	Keo02	5.0	Keo lai	9,130	2015	137	685	
6	An Nhơn	554b	6	2	Keo03	3.9	Keo lai	7,121	2015	152	593	
7	An Nhơn	554b	6	1	Keo03	27.3	Keo lai	49,850	2015	152	4,150	
8	An Nhơn	554b	5	2	Keo03	3.5	Keo lai	6,391	2015	152	532	
9	An Nhơn	554b	2	2	Lồ ô +Ic	7.1	Keo lai	12,965	2015	152	1,079	450
10	An Nhơn	554b	1	1	Lồ ô +Ic	6.4	Keo lai	11,686	2015	152	973	
11	Đạ Kho	572a	3	2	Lồ ô +IIIA1	4.2	Keo lai	7,669	2015	137	575	850
12	Đạ Kho	572a	3	1	Lồ ô +IIIA1	26.4	Keo lai	48,206	2015	137	3,617	600
13	Đạ Kho	572a	1	3	Lồ ô +IIIA1	6.1	Keo lai	11,139	2015	137	836	
14	Đạ Kho	572a	1	2	Lồ ô +IIa	37.6	Keo lai	68,658	2015	137	5,151	250
15	Đạ Kho	572a	1	1	Lồ ô +IIIA1	51.0	Keo lai	93,126	2015	152	7,752	330
Total						228		415,963			33,151	3,350

Year of plantation: 2009

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
1	Quốc Oai	550	8	4	Lồ ô +IIIA1	37.1	Keo lai	67,745	2016	137	5,083	1,200
2	Quốc Oai	550	8	3	Lồ ô +IIIA1	20.3	Keo lai	37,068	2016	152	3,086	
3	An Nhơn	551b	4	4	Lồ ô +IIIA1	18.7	Keo lai	34,146	2016	152	2,842	330
4	An Nhơn	551b	4	1	Lồ ô +IIIA1	23.1	Keo lai	42,181	2016	137	3,165	
5	An Nhơn	551b	3	3	Keo05	11.0	Keo lai	20,086	2016	137	1,507	
6	Đạ Kho	572b	3	3	Lồ ô +IIa	24.6	Keo lai	44,920	2016	137	3,370	
7	Đạ Kho	572b	3	2	Lồ ô +IIa	64.5	Keo lai	117,777	2016	137	8,837	600
8	Đạ Kho	572b	3	1	Lồ ô +IIIA1	16.3	Keo lai	29,764	2017	137	2,233	1110
Total						215.6		393,687			30,123	3,240

Year of plantation: 2010

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
1	Quốc Oai	550	10	3	Keo05	13.5	A. hybrid	24,651	2017	152	2,052	
2	Quốc Oai	550	9	5	Keo05	7.7	A. hybrid	14,060	2017	152	1,170	240
3	Quốc Oai	550	9	4	Lồ ô +IIIA1	3.0	A. hybrid	5,478	2017	137	411	
4	An Nhơn	554b	6	3	Lồ ô +IIIA1	36.6	A. hybrid	66,832	2017	152	5,563	
5	An Nhơn	554b	5	1	Lồ ô +IIIA1	20.6	A. hybrid	37,616	2017	152	3,131	
6	An Nhơn	554b	2	1	Lồ ô +IIIA1	64.4	A. hybrid	117,594	2017	152	9,789	
7	An Nhơn	554b	1	1	Lồ ô +IIIA1	5.4	A. hybrid	9,860	2017	152	821	
8	Đạ Kho	572a	7	5	Lồ ô +IIIA1	18.7	A. hybrid	34,146	2017	137	2,562	700
9	Đạ Kho	572a	7	4	Lồ ô +IIIA1	11.0	A. hybrid	20,086	2017	137	1,507	
10	Đạ Kho	572a	7	3	Lồ ô +IIIA1	8.5	A. hybrid	15,521	2017	137	1,165	300
11	Đạ Kho	572a	7	2	Lồ ô +IIIA1	7.4	A. hybrid	13,512	2017	137	1,014	320
12	Đạ Kho	572a	6	5	Lồ ô +IIIA1	6.6	A. hybrid	12,052	2017	137	904	
13	Đạ Kho	572a	6	4	Lồ ô +IIa	15.6	A. hybrid	28,486	2017	152	2,371	
14	Đạ Kho	572a	6	3	Lồ ô +IIa	9.5	A. hybrid	17,347	2017	137	1,302	
15	Đạ Kho	572a	6	2	Lồ ô +IIa	1.6	A. hybrid	2,922	2017	137	219	
16	Đạ Kho	572a	6	1	Lồ ô +IIIA1	3.2	A. hybrid	5,843	2017	152	486	
Total						233.3		426,006			34,467	1,560

Year of plantation: 2011

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
23	Quốc Oai	550	7	4	Lồ ô +IIIA1	7.5	A. hybrid	13,695	2018	137	1,028	
24	Quốc Oai	550	7	3	Lồ ô +IIIA1	4.1	A. hybrid	7,487	2018	137	562	
25	Quốc Oai	550	7	2	Lồ ô +IIIA1	22.7	A. hybrid	41,450	2018	137	3,110	
26	Quốc Oai	550	6	3	Keo98	42.2	A. hybrid	77,057	2018	152	6,414	1,440
27	Quốc Oai	550	6	2	Keo98	7.5	A. hybrid	13,695	2018	152	1,140	
28	Quốc Oai	550	6	1	Lồ ô+Ic	7.0	A. hybrid	12,782	2018	137	959	
29	An Nhơn	551b	3	2	Lồ ô+Ic	19.5	A. hybrid	35,607	2018	152	2,964	
30	An Nhơn	551b	3	1	Lồ ô+Ic	1.1	A. hybrid	2,009	2018	137	151	
31	An Nhơn	551b	2	2	Lồ ô+Ic	4.6	A. hybrid	8,400	2018	137	630	
32	An Nhơn	551b	2	1	Lồ ô+Ic	5.9	A. hybrid	10,773	2018	152	897	
61	Đạ Kho	572b	5	3	Lồ ô +IIIA1	30.2	A. hybrid	55,145	2018	137	4,137	80
62	Đạ Kho	572b	5	2	Lồ ô +IIa	15.2	A. hybrid	27,755	2018	137	2,082	840
63	Đạ Kho	572b	5	1	Lồ ô +IIa	3.0	A. hybrid	5,478	2018	137	411	240
64	Đạ Kho	572b	4	3	Lồ ô +IIa	5.7	A. hybrid	10,408	2018	137	781	360
65	Đạ Kho	572b	4	2	Lồ ô +IIIA1	28.5	A. hybrid	52,041	2018	137	3,905	
66	Đạ Kho	572b	4	1	Lồ ô +IIIA1	14.4	A. hybrid	26,294	2018	137	1,973	780
Total						219.1		400,076			31,144	3,740

Year of plantation: 2012

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
33	Quốc Oai	550	10	2	Lồ ô+Ic	51.1	A. hybrid	93,309	2019	152	7,767	1,170
34	Quốc Oai	550	9	3	Lồ ô+Ic	3.8	A. hybrid	6,939	2019	137	521	660
35	Quốc Oai	550	9	2	Keo93	35.6	A. hybrid	65,006	2019	152	5,411	860
36	Quốc Oai	550	8	2	Keo93	13.8	A. hybrid	25,199	2019	137	1,891	
37	Quốc Oai	550	8	1	Keo93	2.6	A. hybrid	4,748	2019	152	395	
67	Đạ Kho	572a	8	3	Lồ ô +IIa	9.8	A. hybrid	17,895	2019	137	1,343	
68	Đạ Kho	572a	8	2	Lồ ô +IIa	30.0	A. hybrid	54,780	2019	137	4,110	1,140
69	Đạ Kho	572a	8	1	Lồ ô +IIa	20.7	A. hybrid	37,798	2019	137	2,836	930
70	Đạ Kho	572a	4	1	Lồ ô +IIa	26.2	A. hybrid	47,841	2019	137	3,589	830
Total						193.6		353,515			27,863	5,590

Year of plantation: 2013

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
38	Quốc Oai	550	7	1	Keo93	20.5	A. hybrid	37,433	2020	152	3,116	960
39	Quốc Oai	550	5	1	Keo98	73.2	A. hybrid	133,663	2020	152	11,126	1,640
71	Đạ Kho	572a	7	1	Lồ ô +III A1	3.4	A. hybrid	6,208	2020	137	466	
72	Đạ Kho	572a	5	3	Lồ ô +III A1	2.2	A. hybrid	4,017	2020	152	334	
73	Đạ Kho	572a	5	2	Lồ ô +III A1	5.1	A. hybrid	9,313	2020	137	699	
74	Đạ Kho	572a	5	1	Lồ ô +III A1	8.0	A. hybrid	14,608	2020	137	1,096	
75	Đạ Kho	572a	4	3	Lồ ô +III A1	1.4	A. hybrid	2,556	2020	137	192	
76	Đạ Kho	572a	4	2	Lồ ô +III A1	18.1	A. hybrid	33,051	2020	137	2,480	
77	Đạ Kho	572a	2	1	Lồ ô +III A1	22.8	A. hybrid	41,633	2020	152	3,466	
Total						154.7		282,482			22,975	2,600

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Year of plantation: 2014

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
40	Quốc Oai	550	9	1	Keo03	29.9	A. hybrid	54,597	2021	152	4,545	1,140
41	Quốc Oai	550	3	3	Keo03	21.4	A. hybrid	39,076	2021	152	3,253	720
42	Quốc Oai	550	3	2	Keo03	22.2	A. hybrid	40,537	2021	152	3,374	210
43	Quốc Oai	550	3	1	Keo03	21.2	A. hybrid	38,711	2021	137	2,904	300
78	Triệu Hải	571	5	1	Lồ ô +III A1	55.4	A. hybrid	101,160	2021	137	7,590	1,050
79	Triệu Hải	571	4	1	Lồ ô +III A1	12.5	A. hybrid	22,825	2021	137	1,713	
Total						162.6		296,906			23,379	3,420

Year of plantation: 2013

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
38	Quốc Oai	550	7	1	Keo93	20,5	A. hybrid	37.433	2020	152	3.116	960
39	Quốc Oai	550	5	1	Keo98	73,2	A. hybrid	133.663	2020	152	11.126	1.640
71	Đạ Kho	572a	7	1	Lồ ô +III A1	3,4	A. hybrid	6.208	2020	137	466	
72	Đạ Kho	572a	5	3	Lồ ô +III A1	2,2	A. hybrid	4.017	2020	152	334	
73	Đạ Kho	572a	5	2	Lồ ô +III A1	5,1	A. hybrid	9.313	2020	137	699	
74	Đạ Kho	572a	5	1	Lồ ô +III A1	8,0	A. hybrid	14.608	2020	137	1.096	
75	Đạ Kho	572a	4	3	Lồ ô +III A1	1,4	A. hybrid	2.556	2020	137	192	
76	Đạ Kho	572a	4	2	Lồ ô +III A1	18,1	A. hybrid	33.051	2020	137	2.480	
77	Đạ Kho	572a	2	1	Lồ ô +III A1	22,8	A. hybrid	41.633	2020	152	3.466	
Total						154,7		282.482			22.975	2.600

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Year of plantation: 2014

No.	Commune	Compartment	Sub-compartment	Plot	Status of land use	Area (ha)	Specie	No. of Seedlings (seedling)	Harvesting year	Sale volume/ha (m ³)	Sale volume/Plot (m ³)	New road (m)
40	Quốc Oai	550	9	1	Keo03	29,9	A. hybrid	54.597	2021	152	4.545	1.140
41	Quốc Oai	550	3	3	Keo03	21,4	A. hybrid	39.076	2021	152	3.253	720
42	Quốc Oai	550	3	2	Keo03	22,2	A. hybrid	40.537	2021	152	3.374	210
43	Quốc Oai	550	3	1	Keo03	21,2	A. hybrid	38.711	2021	137	2.904	300
78	Triệu Hải	571	5	1	Lồ ô +III A1	55,4	A. hybrid	101.160	2021	137	7.590	1.050
79	Triệu Hải	571	4	1	Lồ ô +III A1	12,5	A. hybrid	22.825	2021	137	1.713	
Total						162,6		296.906			23.379	3.420

ANNEX 3: Silvicultural Guidelines

Species: Acacia hybrid (Cuttings) Density: 1,660 stem/ha

Key activities	Details	Description
1. Planting	1.1. Vegetation treatment	Time of vegetation treatment is from Jan. to Feb. As for exhausted forest sites, clear all to get timber and firewood. When dried, burn them. The remained articles, burn again. As for sites after logging, clear and chop the branches, then burn. Firebreaks must be set up to avoid the spreading of fires.
	1.2. Hole digging	Hole sizes: 30 cm x 30 cm x 30 cm. Quincunx arrangement, lines are paralleling to the contour lines, density is 1.660 per ha, line to line: 3 m, tree to tree: 2 m. When digging, set aside the top soil for filling in when planting.
	1.3. Hole filling in + fertilizing	Filling in with the top soil to cover ½ of hole depth, put 100 g of NPK, the soil + 1 kg of micro organism matter onto the hole. Then fertile up to 2/3 of the hole depth and mix up with fertilizer. Fulfil in up to the surface in tortoise-shelled shape 5 cm in height. . Somewhere if harmful insects exist, add 20g/hole of insecticide per hole before planting.
	1.4. Seeding transport and planting	Seedlings should be ready at planting sites 7-10 days for recover before planting. Only plant the trees when soil is moist enough and in good weather. Planting happens in rainy season from mid-June to mid-July. Seedlings should be well distributed by the hole side before planting and plant them right after 7 putting them by hole side. Planting top-down. Materials in side the hole should well be beaten, put off the plastic coat then gently place the seedling in, cover the seedling with soil up to the root-top
	1.5. Beating - up	10 - 20 days after planting, check the site to see the rate of survival. Beating up is applied if necessary.
2. Tending	2.1. Year 1: Twice	<u>Time 1</u> : Tending in month 8- month 9. Clear all the vegetations, digging round the trees, weeding along the tree line with 0.8 - 1 m in width + beating up.
		<u>Time 2</u> : In month 11- month 12. Clear all the vegetations set up fire break round the stand, protection.
	2.2. Year 2: Twice	<u>Time 1</u> : From month 5 to month 6. Clear all the vegetations, beating up.
		<u>Time 2</u> : From month 10 to month 12. Clearing all the vegetation, digging round the trees 0.8 - 1m, setting up fire break around the stand, protection.

Key activities	Details	Description
	2.3. Year 3: Twice	<u>Time 1</u> : From month 5 to month 6. Clear all the vegetations.
		<u>Time 2</u> : From month 10 to month 12. Clear all the vegetations, branching poor branches. Set up fire break round the stand, protection.
3. Protection	From year 1 to the end	<u>Fire prevention</u> : set up fire break round the stand in a form of clear vegetation transects where sensitive to fire, 8 m in width (total area of fire break = 10% area of designed stand)
		Prevention of other factors to harvest time: Pests and diseases, animals, damages by people and nature.
4. Harvesting	1. Harvesting mode	Clear logging
	2. Felling	Felling is implemented by FE, before logging, FE staff do estimation of forest yield serving as basis for valuation. Logging is done by chainsaw, including following steps: - Felling; - Pruning top and branches; - Cutting into logs; - Debarking
	3. Transporting	- FE is responsible for transporting logs from logging site to road-side yard of the FE. Average transporting distance in the project site is 200 - 300 m - Wood transport is mainly done manually in combination with light machines.

ANNEX 4: Terms of Reference for Project Staff

1. FE staff

(1) Director of Da Teh Enterprise: 01 person

Duties and responsibilities:

- Responsible for overall planting activities and implementation of all project components.
- On behalf of FE to sign loan agreement for project activities;
- Implementing, managing and monitoring entire project activities to ensure the achievement of set objectives;
- Undertaking regular monitoring of project progress and implement midterm and final evaluation of the project;
- Ensuring timely access to project performance information for decision making to all levels; and
- Carrying out other duties as directed by the higher authorities.

Qualifications:

- University degree;
- At least 5 years of working experience in forestry related project;
- Having good understanding of government policies.

(2) FE vice-director: 01 person.

Duties and responsibilities:

- Assisting the director in areas assigned and authorized.
- Handling works on behalf of the director during his absence.

Qualifications:

- University degree;
- At least 5 years of working experience in forestry related project;
- Having good understanding of government policies.

(3) HR and admin. Function: five persons

Duties and responsibilities:

- Advising the director on human resource issues, staff management, administration, and other tasks as per assignment by the director.

Qualifications:

- At least 1 person holding university degree, preferably in HR, administration. The remaining four persons should at least have higher school/vocational school diploma;
- At least 5 years of working experience in similar position;

(4) Economic function: 2 persons

Duties and responsibilities:

- Advising the director in financial aspects of the afforestation project, monitoring planning, credit loan access, especially on loan, and business contracts with partners as according to FE regulations.
- Advising the director on labour contract with farmer households participating in the project.
- Accessing and undertaking business transaction with wood processing units in and outside the province, which are considered project's potential market..
- Preparing financial procedures, managing financial books and expenditures;
- Managing project accounts, entering accounting data, preparing, reviewing and checking invoices, filing financial documents, doing bank transfer and managing cash;
- Preparing and updating procurement plan, procurement document; managing procurement process including price negotiation, arranging distribution of seedlings, fertilizers with local suppliers.
- Preparing annual budget plan;
- Reporting project annual capital flow;
- Implementing other works as assigned by the director.

Qualifications:

- At least 1 staff holding university degree in economics, and finance, the other should at least possess college diploma in finance, or economics;
- Good understanding of accounting, goods procurement, and computer skills.
- At least 2 year experience in similar position;

(5) Technical and forest protection division: 6 persons

Duties and responsibilities:

Assisting director in forest planting, tending and harvesting; executing project's forest protection and fire-prevention/control network, specifically:

- Implementing works according to project plan.
- Assisting directorate in implementing production activities timely according to approved afforestation plan;
- Monitoring and providing technical instructions for forest planting in compliance to the design ;
- Selecting and controlling seedlings;
- Monitoring plantations harvesting;
- Conducting technical training for local labour.
- Cooperating with compartment staff to carry out awareness raising activities for local people on Forest Protection and Development Law, and roles of plantation forest in livelihood as well as environment improvement;
- Carrying out other works as assigned by director and line managers.

Qualifications:

- At least 2 forestry engineers, of which one is specialized in nursery and tree planting techniques. The remaining four staff should at least possess diploma of higher vocational school of forestry;

- 3 year working experience in similar positions;

(6) Business execution division: 3 persons

Duties and responsibilities:

- Direct and execute all production activities and technical guidance including nursery, seedling production, tree planting, tending, protection, harvesting and product processing.

- Carrying out other works as assigned by director and line manager.

Qualifications:

- At least university degree, preferably in forestry;

- At least 2 year working experience in similar position.

(7) Direct production unit: 45 people

a) Nursery: 5 people

Duties and responsibilities:

- Responsible for seedling production and supply to project; participating in forest planting activities;

- Carrying out other works as assigned by director and line manager.

Qualifications:

- At least possess diploma of higher vocational school of forestry;

- At least 5 year working experience in similar position.

b) Clusters of forest compartments: 20 people

These clusters are formed from adjacent compartment. There are heads of cluster, heads of compartments and compartment staff.

Duties and responsibilities:

- Heads of cluster and compartment are in charge of planting, tending and protection of production forest in corresponding areas of their administration;

- Compartment staff collaborate with local commune authorities to monitor and directly participate in planting, tending, protection, and harvesting activities. Following are distributions of compartment clusters:

- + Cluster 1: 6 staff in charge of compartments located in Trieu Hai, Da Kho communes

- + Cluster 4: 6 staff in charge of compartments located in Quoc Oai commune

- + Cluster 5: 8 staff in charge of compartments located in An Nhon, Huong Lam, Da Lay communes

Qualifications:

- Cluster heads should possess diploma of higher vocational school of forestry, and experienced in planting, tending, protection and harvesting;
- Others should have experience in planting, tending and protection of plantation forest.

c) Wood product processing factory: 20 people

Duties and responsibilities:

- Responsible for wood products processing;
- Preparing plan of market demand as well as production plan for local consumption and outside province market.
- Carrying out other works as assigned by director and line manager.

Qualifications:

- 01 person holds university degree preferably with specialization in wood product processing; experience in business sector.
- The remaining can be either technician or those experienced in wood product processing.

2. People participating in the project

Duties and responsibilities:

- Undertaking forest planting, tending and protection in complying with contracts signed with FE.

Qualifications:

Farmer who sign labour contract with FE, who have experience in planting, nursery, and wood processing, and who live near project site...

ANNEX 5: Preliminary Sample Forms

Unit

.....

Socialist Republic of Vietnam

Independence – Freedom - Happiness

VERIFICATION AND HAND-OVER TABLE OF FOREST PLANTING PREPARATORY WORK

(Step 1 – Internal check and hand-over with compartment clusters)

1. Project title:.....

2. Location: (village, commune, district, province):.....

3. Participants:

- *Project management board:* Mr./Mrs.:

- *Compartment cluster (A, B, C ...):* Mr./Mrs.....

4. Verification results:

Contents	Location			Area (ha)		Vegetation clearing (ha)		Hole digging		Pre-planting fertilizer application		Hole fill-up		Area of 'QC pass' plot (ha)	Remark
	Compartment	Sub-compartment	Plot	Design	Operation	Satisfactory	No satisfactory	Satisfactory	No satisfactory	Satisfactory	No satisfactory	Satisfactory	No satisfactory		
1 Overall results of verification															
2 Field measurement:															
Overall measurement															
Measurements by sample plot:															
Sample plot 1															
Sample plot 2															
.....															
Total															

5. Conclusion, Recommendation:

.....

Datemonthyear

Technical staff, Party A

Compartment cluster

Unit

.....

Socialist Republic of Vietnam

Independence – Freedom - Happiness

VERIFICATION & HAND-OVER TABLE OF FOREST PLANTING WORK

(Step 1 – Internal check and hand-over with compartment clusters)

1. Project title:.....

2. Location: (village, commune, district, province):.....

3. Participants:

- *Project management board:* Mr./Mrs.:

- *Compartment cluster (A, B, C ...):* Mr./Mrs.....

4. Verification results:

Contents	Location			Area (ha)		Planting species		Planting density (trees/ha)		Good viability (trees/ha)		Area of 'QC pass' plot (ha)	% to be paid	Remark
	Compartment	Sub-compartment	Plot	Design	Operation	Right	Wrong	Design	Actual dens.	No.	%			
1 Overall results of verification														
2 Field measurement:														
Overall measurement														
Measurements by sample plot:														
Sample plot 1														
Sample plot 2														
.....														
Total														

5. Conclusion, Recommendation:

.....

Datemonthyear

Forest Enterprise

Compartment cluster

Unit

.....

Socialist Republic of Vietnam

Independence – Freedom - Happiness

VERIFICATION & HAND-OVER TABLE OF PLANTATION TENDING WORKS, YEAR TIME:

1. Project title:.....

2. Location: (village, commune, district, province):.....

3. Participants:

- *Project management board:* Mr./Mrs.:

- *Compartment cluster (A, B, C ...):* Mr./Mrs.....

4. Verification results:

STT	Compartment	Sub-compartment	Block, Sample plot	Area (ha)		Clearing, tending (ha)		Soil harrow and heaping (No.)		Fer. application (No. of planting hole)		No. of survival trees after additional planting		Area of 'QC pass' (ha)	Remark
				Design	Operation	As of Design	Deviation from design	As of Design	Deviation from design	As of Design	Deviation from design	trees /ha	Per. (%)		
1			Block												
2			Plot 1												
3			Plot 2												
			...												
Area designed, area implemented, area checked with 'QC pass'															

5. Conclusion, Recommendation:

.....
.....
.....

Datemonthyear

Forest Enterprise

Compartment cluster

Unit

Socialist Republic of Vietnam

Independence – Freedom - Happiness

MINUTE OF VERIFICATION AND HAND-OVER

1. Component:

2. Project:

3. Location: (village, commune, district, province)

4. Participants of verification and hand-over:

- Representative of verifying party (Party A)

+ Mr./Mrs.

- Representative of verified party (Party B)

+ Mr./Mrs.

+ Mr./Mrs.

+ Mr./Mrs.

5. Verification results::

a/ Area implemented: ha, versus contract, percentage implemented: %

b/ Results of verification: (provide details of technical contents of corresponding verification tables/formats such as: planting site preparation, planting, tending accordingly).

6. Conclusion and recommendation:

.....
.....
.....
.....
.....
.....

Side A Representative
(names of all participants)

Side B Representative
(names of all participants)

Representative of local authorities
(if applicable)

Training Package

Book 1:	Training Plan on Capacity Building for Preparing Feasibility Studies and Implementation Plans for Production Forest/Agroforestry Development Projects in Vietnam
Book 2:	Manual for Preparation of Feasibility Study Reports for Production Forest/Agroforestry Development Projects in Vietnam
Book 3:	Manual for Preparation of Implementation Plans for Production Forest/Agroforestry Development Projects in Vietnam
Book 4:	Model F/S of Thai Nguyen Province
	Book 4-1: Model Feasibility Study Report for Smallholder Production Forest Development Project in Thai Nguyen Province
	Book 4-2: Model Feasibility Study Report for Agroforestry Development Project in Thai Nguyen Province
Book 5:	Model IP of Thai Nguyen Province
	Book 5-1: Model Implementation Plan for Smallholder Production Forest Development Project in Thai Nguyen Province
	Book 5-2: Model Implementation Plan for Agroforestry Development Project in Thai Nguyen Province
Book 6:	Monitoring and Evaluation Report on Technical Training of Participating Provinces
Book 7:	Market Trend Reference Book on Wood-based and Agroforestry Products
Book 8:	Feasibility Study Reports of Participating Provinces
	Book 8-1: Feasibility Study Report on Agroforestry Project in Ta Hoc Commune, Mai Son District, Son La Province
	Book 8-2: Feasibility Study Report on Production Forest Establishment Project in Nui Thanh District, Quang Nam Province
	Book 8-3: Feasibility Study Report on Treatment of Exhausted Natural Forest and Production Forest Establishment Project in Da Teh District, Lam Dong Province
	Book 8-4: Feasibility Study Report on Afforestation Project for Serving Biodiversity Conservation in Long An Province
Book 9:	Implementation Plans of Participating Provinces
	Book 9-1: Implementation Plan on Agroforestry Project in Ta Hoc Commune, Mai Son District, Son La Province
	Book 9-2: Implementation Plan on Production Forest Establishment Project in Nui Thanh District, Quang Nam Province
	Book 9-3: Implementation Plan on Treatment of Exhausted Natural Forest and Production Forest Establishment Project in Da Teh District, Lam Dong Province
	Book 9-4: Implementation Plan on Afforestation Project for Serving Biodiversity Conservation in Long An Province



DEPARTMENT OF FORESTRY

Implementation Plan

**on afforestation project for serving
biodiversity conservation
in Long An Province**

Book 9-4: IP Long An

THE DEVELOPMENT STUDY ON CAPACITY BUILDING
FOR PREPARING FEASIBILITY STUDIES AND IMPLEMENTATION PLANS
FOR AFFORESTATION PROJECTS IN THE SOCIALIST REPUBLIC OF VIETNAM
---FICAB---

Preface

“Implementation Plan on Afforestation Project for Serving Biodiversity Conservation in Long An Province (Book 9-4: IP Long An)” is part of the training package prepared under the development study on capacity building for preparing feasibility studies (F/S) and implementation plans (IP) for afforestation projects in the Socialist Republic of Vietnam (hereafter referred to as “FICAB”).

The immediate objective of FICAB is to strengthen capacities for the preparation of afforestation projects through practical On-the-Job-Training (OJT), seminars and workshops. Five provinces have been selected as targeted provinces for FICAB (Thai Nguyen, Son La, Quang Nam, Lam Dong and Long An Provinces).

FICAB was divided into two phases. Phase I was to prepare Model F/S and IP as well as other training materials in Thai Nguyen, a Core Province (CoP). The second phase was to implement technical training for staff members of four other provinces as Participating Provinces (PPs), i.e. Son La, Quang Nam, Lam Dong, and Long An Provinces. The training was implemented using Model F/S, IP and other training materials.

Through conducting FICAB, four forms of output are to be generated. The first is an enhanced capacity for MARD personnel. Selected staff members of MARD develop administrative and coordination capacity for supervising the quality of F/S and IP. The second is an enhanced capacity for CoP and PPs personnel. Selected staff members of CoP and PPs enhance the capacity for preparing F/Ss and IPs. The third is the development of a monitoring and evaluation method for the technical training for preparation of F/S and IP. The fourth is the development of a training package for conducting the technical training for preparing F/S and IP for afforestation projects.

The training package is prepared as one of the four above forms of output of the FICAB. The entire training package comprises the following nine (9) books:

Book 1: Training plan

Book 2: Manual for preparation of feasibility study reports for production forest / agroforestry development projects in Vietnam

Book 3: Manual for preparation of implementation plans for production forest / agroforestry development projects in Vietnam

Book 4: Model F/S of Thai Nguyen Province

Book 5: Model IP of Thai Nguyen Province

Book 6: Monitoring and evaluation report on technical training of PPs

Book 7: Market trend reference book on wood-based and agroforestry products

Book 8: F/S reports of Son La, Quang Nam, Lam Dong and Long An Provinces

Book 9: IPs of Son La, Quang Nam, Lam Dong and Long An Provinces

‘Book 9-4’ was prepared by the Provincial Study Team of Long An Province under the guidance of local consultant engineers.

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Abbreviation

MARD	Ministry of Agriculture and Rural Development
DARD	Department of Agriculture and Rural Development
PMB	Project Management Board
PIU	Project Implementation Unit
FIPI	Forest Inventory and Planning Institute
F/S	Feasibility Study
JICA	Japan International Cooperation Agency
JST	JICA Study Team
PAM	WFP's Programme Alimentaire Mondiale
IP	Implementation Plan
PC	People committee
PST	Provincial Study Team
MB	Management Board
RMB	Reserve Management Board
BC	Basic construction

Summary

Part I Summary of the project

In this part, in order to clarify contents of the project which is targeted at implementation planning, among the content of F/S report, project location and area, project objectives, project outputs, project components, main activity plan and project cost are summarized, and PDM which shows the project framework, is attached.

Part II Project Implementation Plan

1 Project implementation arrangement

Project management board (PMB) is established as an implementing agency. PMB has three internal division under the board of director which are accounting, planning and technical divisions. There are six staffs in respective divisions, two staffs each for the board of director and accounting division, and one staff each for planning and technical division. The specific responsibilities of the PMB are as follows: i) Overall project implementation, ii) Establishing management mechanism, iii) Preparing project implementation guideline, iv) Preparing annual work and financial plan v) Coordinating with related agencies and so on. A protection and production team is established for carrying out afforestation activities under supervising by PMB.

2 Project Implementation Schedule

The assistance period of the project is eight years. In first year, it is called preparation period; all preparation works are implemented. From second to eighth year, it is called operation period; afforestation activities are carried out. In the preparation period, following activities are conducted: i) Preparing loan mechanism, ii) Establishing project management system such as establishing PMB and iii) Preparing work and financial plan. In the operation period, a series of afforestation activities in a model rotation cycle is repeatedly conducted. In the model rotation cycle, schedule of afforestation activities, which is composed with 11 steps, are shown as follows; planting is carried out in first year, then tending is carried out from the second year to fourth year, protection activities are operated from first year to seventh year.

3 Financial Management

The project is funded by two financial sources, one is bank loan and the other is provincial budget. Provincial budget come from two sources: provincial treasury and self-capital of PMB. The bank loan is borrowed from the Provincial Development Bank. Financial procedures are followed policies and regulations of the Bank. In order to manage the bank loan, a new account of PMB is opened at the Provincial Development Bank. As for provincial budget, the regulations of government budget management are applied. PMB prepares annual budget plan, and submits it to Department of Planning and Investment and after getting approval by Department of Finance, the plan is submitted to the Long An PPC for allocating provincial budget. Provincial budget is disbursed through Provincial Treasury. At this step, PMB presents vouchers such as procurement contract, consultant service contract and so on.

4 Procurement management

In the project, following goods and services are procured; anti-forest fire equipments; seedlings and fertilizers; consulting service for designing infrastructure construction and afforestation; service for carrying out infrastructure construction, planting, tending and protecting and so on. PMB has to follow the state regulations on procurement process. The Bid Law is applied for procurement process, including following steps: i) Preparing bid plan and submit to Provincial PC for approval, ii) Inviting agents for bidding, iii) Collecting bid profiles, iv) Bid committee select a bidder, v) Presenting bid results to Provincial PC for approving and vi) Signing contract with selected bidders.

5 Sale and marketing

In the process of sales and marketing, PMB, intermediate agent and end user are identified as stakeholders. PMB is responsible for coordinating sales and marketing activities among stakeholders. In the process of sale and marketing activities, PMB conducts following activities as producer: i) Research on price of Melaleuca, ii) Identifying potential users, iii) Providing information to potential users on products, iv) Negotiation with potential users on business conditions such as price, specification, quantity, v) Selection of buyer among potential users, vi) Contract for selling, vii) Delivery of the products and viii) Receiving payment. Buyer and intermediate agent also take necessary actions following the PMB action mentioned above.

6 Training plan

The training need is focused on following two areas: training for project management and for afforestation technique. The trainees of the training on project management are staffs of PMB, production and protection team leaders who are engaged in project management. It is planned to organize eight days training course. Can Tho University and DARD provide trainers and materials for this training course. Afforestation technique is crucial as it directly affects on forest yield and the effectiveness of the project. It is necessary to organize training on afforestation technique for project key actors in order to enhance their afforestation technique. The target trainees are workers of production and protection team. It is planned to conduct six days training course. Can Tho University, DARD, Extension Centre provide trainers, training tools and materials for training course.

7 Monitoring and evaluation

Monitoring aims to check the progress of the project and to take actions for modification of the plan if necessary. The three steps activities are set as the monitoring mechanism. Overall responsibility for monitoring belongs to PMB. Planning and technical staffs are in charge of daily monitoring. In order to implement monitoring, following indicators are established: i) Plantation area is established by 2013, ii) Loan is disbursed by 2008, iii) Harvesting and sales plan is prepared by 2014 and iv) PMB is established by 2007.

There are two types of evaluation as follows: i) Evaluation of contracted activities such as infrastructure construction, equipment procurement, planting, consulting service. These contracted activities are evaluated by an independent evaluation committee. ii) Evaluation of the objective of assistant period, the project objective and the overall objective, these objectives are evaluated after completing the project.

Introduction

This report was prepared using the set of reference materials including F/S report conducted from July 2006 to July 2007 in Lang Sen Wetland Reserve, Tan Hung District, Long An Province.

This study proposal was initially submitted to JICA in May 2005 by Long An DARD as one volume of a training program to enhance capacity on preparing feasibility studies and implementation plans for afforestation projects. After completing F/S report, Long An PST has prepared this IP report.

This report was completed with the assistance from JST and FIPI in checking, editing based on the Manual for preparing IP and the F/S of Long An. JST consists of experts from Japan Forest Technology Association.

PART I SUMMARY OF THE PROJECT

1. Geographical location and area of the project area

1.1. Geographical location

Project area belongs to Lang Sen Wetland Reserve located on the administrative area of Vinh Loi and Vinh Chau A commune, Tan Hung district, Long An province. Total natural area is 2,016 ha of which proposed area for the project is 1,061 ha. The conservation area is located 10 km away from Tan Hung town and about 120 km away from Tan An town, the whole area is in conjunction with a relatively developed transport network that links to market centers of various districts within the province as well as of other surrounding provinces.

1.2. Area

Total natural area of the project area is 2,016 ha. Out of the total area, proposed project site (planting site) covers an area of 1,058 ha which covers mainly with grass land and scattered regeneration Melaleuca as follows:

Table 1 Current land use status in the project area

Unit: ha

Order	Status	Total area	Project site
1	Continuous Melaleuca forest	647.4	
2	Low land	329.8	111.2
3	Grass	364.8	364.8
4	Scattered regeneration area (Melaleuca & Rush)	343.8	343.8
5	Rush & straw grass	237.9	237.9
6	Canal - dyke	92.7	
Total		2,016.38	1,057.7

Source: The survey results in 2006

2. Project objective

2.1. Overall objective

- Increase the economical efficiency of buffer zone.
- Generating income for Management board of Lang Sen Wetland Reserve and contributing to core zone conservation.
- Contribute to the ecosystem improvement such as habitat for bird and fish.

2.2. Immediate objectives

Enhancing economic utilization of the buffer zone: after implementing the project, from 2014 onward, over 1 million Melaleuca trees per year will be harvested;

By 2013, 1,057 ha of Melaleuca production forest are established in the buffer zone of the Lang Sen Wetland Reserve.

2.3. Expected outputs

Following achievements are expected to attain by the end of the project:

- About 1,057 ha of Melaleuca forest will be established in the buffer zone of Lang Sen Wetland Reserve.
- Technical and business promotion capacity of the staff members of the Lang Sen Wetland Reserve will be strengthened.
- Management and implementation capacity of the Management Board in terms of economic and preservation activities will be improved.
- Partial cost of Lang Sen conservation activities (management and protection) will be extracted from project's turnover. All project turnover from 2007 to 2013 and 10% or project turnover from 2014 to 2019 will be used for Lang Sen conservation activities.

3. Project components

3.1. Project component

The proposed project will include three interactive components as following:

3.1.1. Forest plantation component

This component includes some activities: constructing basic items; procuring necessary facilities; making finance plan; preparing contracts for materials, labor, commercial promotion, products sale as objectives mentioned in the F/S.

3.1.2. Support to sustainable forest plantation component

This component is to help the PMB and staff members of Lang Sen Wetland Reserve to obtain access to sufficient financial resources according to the loan plan and help them become capable in exercising technical requirements of forest plantation, project management, finance management and products sale.

3.1.3. Management, monitoring and evaluation component

This component is to monitor and evaluate the progress of project implementation in order to achieve the expected outputs as well as to achieve the project objectives. Regularly monitoring will be conducted by PMB in order to timely adjust inappropriate project interventions.

3.2. Main activities

Main activities of the project includes constructing basic items, procuring facilities, planting forest and harvesting forest as describing in the following tables:

Other activities such as consulting with bank, technical and project management training will be carried out at the same time with above activities.

Table 2 Annual forest plantation plan*Unit: ha*

Species	2008	2009	2010	2011	2012	2013	Total
Total	172.12	147.46	157.96	162.75	194.56	222.88	1,057
Melaleuca	172.12	147.46	157.96	162.75	194.56	222.88	1,057

Table 3 Annual harvest plan

Implementation year	2014	2015	2016	2017	2018	2019	Total
Year	8	9	10	11	12	13	
Harvesting area (ha)	172.12	147.46	157.96	162.75	194.56	222.88	1,057
Melaleuca stake 5 (tree)	757,328	648,824	695,024	716,100	856,064	980,672	4,654,012
Melaleuca stake 4 (tree)	220,314	188,749	202,189	208,320	249,037	285,286	1,353,894
Melaleuca stake 3 (tree)	292,604	250,682	268,532	276,675	330,752	378,896	1,798,141
Firewood (stere)	4,819	4,129	4,423	4,557	5,448	6,241	29,616

Table 4 Basic construction Plan

No	Item	Specifications	Quantity	Implementing year
I	Digging Canal		85,612.50 m³	2007
1	Compartment Canal		49,500 m ³	
	Canal T6	L=4.125m; B=8; b=4; h=2m	49,500 m ³	
2	Plot Canal		36,112 m ³	
	- Canal 1	L=1.075m, B=6; b=3; h=1,5m	7,256 m ³	
	- Canal 2	L=1.100m, B=6; b=3; h=1,5m	7,425 m ³	
	- Canal 3	L=1.575m, B=8; b=4; h=2m	10,631 m ³	
	- Canal 4	L=1.600m, B=8; b=4; h=2m	10,800 m ³	

4. Project cost

Project cost is estimated based on a project cycle of seven years (according to the Melaleuca plantation cycle). Total estimated cost of the project including physical contingency and price contingency for a project cycle is about 23.168 billion VND. The detail cost is described in the table below.

(1) Production forest development

1,057 ha of Melaleuca plantation are established during the assistance period of the project. Average basic cost for one ha plantation is about 16.6 million VND (about 1,036 USD) and the total project cost from 2007 to 2013 is about 23 billion VND including contingencies (1,437 million USD). Out of this figure, Planting cost of the Component 1 accounts 85% of the basic cost (33% total forest planting cost is labor cost, labor cost rate is roughly at 49,500 VND/man-day); cost for infrastructure construction accounts for 5% of total basic cost; other costs make up about 10% of total basic cost.

(2) Support to capacity building

Estimated cost for this component is about 177 million VND. The majority share of this amount is allocated for training activities to improve management, technical and marketing capacity of staff members.

(3) Project Management and Monitoring and Evaluation

Estimated cost for this component is about 1.5 million VND.

(4) Contingencies

Physical contingency is assumed at 5%. Expected inflation rate is 5% p.a. and price contingency is calculated base on this inflation rate.

Table 5 Project cost for the assistance period

Unit: million VND

Project component	Total cost (2007-2013)	Percentage	Bank	Government Budget	PMB
1. Production forest plantation (Component 1)	15,801	68%	11,061	0	4,740
1-1 Production forest development (Component 1-1)	14,942	64%	10,460	0	4,483
1-2 Infrastructure construction (Component 1-2)	859	4%	602	0	258
2. Supporting afforestation (Component 2)	177	1%	0	177	0
3. Project management, monitoring, evaluation (Component 3)	1,543	7%	0	1,543	0
Total basic cost	17,522	76%	11,061	1,721	4,740
Physical contingency	876	4%	553	86	237
Price contingency	4,770	21%	3,018	459	1,293
Total project cost	23,168	100%	14,632	2,266	6,271
Percentage of financial sources			63%	10%	27%

5. Project design matrix

Project name: A project on Melaleuca production forest plantation on Lang Sen Conservation area- Long An Province

Project area: A part of Lang Sen Wetland Reserve, Vinh Chau A, Tan Hung district, Long An province

Duration of the assistance period of the project: 2007-2013

Target beneficiary: Lang Sen Wetland Reserve Management Board

Table 6 Project design matrix

Items	Indicators	Means of verification	Assumptions
<u>Overall objective</u> 1. Economic utilization of the buffer zone of the conservation area is promoted 2. Conservation of the core zone is promoted.	1. By 2019, the turnover from the production forest in the buffer zone is 57 billion VND (2006 constant price basis). 2. From 207-2013, all annual revenue from the project area will serve conservation purpose. From 2014- 2019, 10% of annual revenue from the project will be spent on conservation activities (mainly for management and protection work).	Evaluation reports of authority agencies and financial reports,	Provincial government does not change policy on supporting conservation efforts of the MB
<u>Immediate objective</u> Melaleuca production forest is established on the conservation area	From 2014 to 2019, over 1 million Melaleuca trees will be harvested and sold in the market annually.	Records of forest plantation inspection Regular reports	Market for the target products is stable and developed No forest fire No diseases outbreak
<u>Objective of the assistance period</u>	By 2013, 1,057 ha Melaleuca will be established in the buffer zone of the Wetland Reserve	Project implementation report	
<u>Expected outputs</u> 1. The whole area of proposed project site will be covered with Melaleuca production forest. 2. Technical and marketing capacity of the Management Board staff is enhanced. 3. Managerial and implementing capacity of MB for economic and conservation activities are strengthened.	1. By 2013, 1,057 ha of Melaleuca forest is established. 2. By 2007, one training course will be conducted with 20 staff members attending the trainings on project management. By 2008, 30 staffs will be trained on silviculture technique. 3. The end of the project, about 300 people participated in forest plantation and be trained with relevant techniques.	Annual checking of record and taking over. Site checking Other types of report	Support of the local authorities to production forest plantation of the conservation area remains unchanged. Interest rates does not change in a way that is disadvantage for the borrowers

<u>Activities</u> 1.1 The Management Board (MB) makes overall and annual forest plantation plan. 1.2 The MB procures needed equipments for constructing necessary infrastructure. 1.3 The MB carries out planting of Melaleuca production forest. 1.4 The MB harvests and sells products from forest. 2.1 The MB develops loan plan and project plan 2.2 The MB consults potential financial institutions and other relevant organizations to mobilize financial investment. 2.3 The MB conducts capacity building trainings on technical, management, sales and marketing for MB staff members. 2.4 The MB establishes a special unit to implement Melaleuca production forest 3.1 Monitoring and evaluating progress of project implementation.	<u>Inputs:</u> Total project cost: 23.167 billion VND 1. Forest planting cost: 15.801 billion VND 2. Trainings cost: 0.177 billion VND 3. Management, M&E cost: 1.543 billion VND 4. Physical contingency (5%): 0.876 billion VND 5. Price contingency (5%): 4.770 billion VND 6. Labor: 256,000 man-days	<u>Pre conditions:</u> Provincial government approves the project. - Credit scheme is agreed with Vietnam Development Bank
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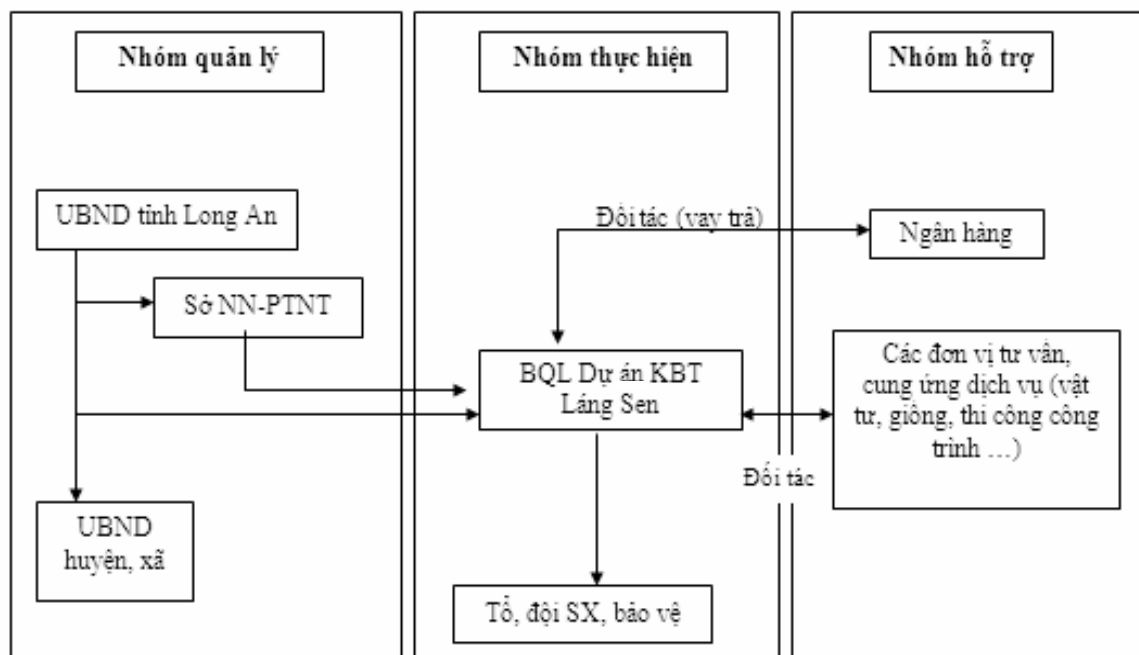
PART II PROJECT IMPLEMENTATION PLAN

I. PROJECT IMPLEMENTATION ARRANGEMENT

1. Project implementation arrangement

Project management board (PMB) will be established as an individual supporting body to the project. The PMB will work under the Long An PC and will receive support from the District Planning Division and other technical departments of the DARD on technical matters. The PMB will also receive support from the Sub-Department of Forest Protection, communal people committee of the neighboring communes and Tan Hung District PC in forest management, protection and forest fire prevention.

Figure 1 Organizational chart for project implementation



2. Implementation units

2.1. Project management Board (PMB)

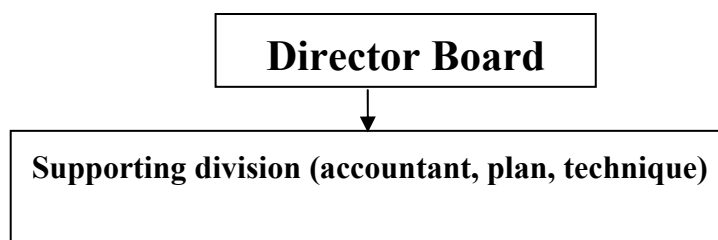
Director Board and chief accountant of PMB will be established by Long An PPC. Other personnel of PMB including accountant, technical and planning division will be decided by project director.

2.1.1. Organizational chart of PMB

The PMB will be accountable for management, implementation, monitoring, evaluation and reporting project implementation progress. The PMB will directly benefit from project outcomes and be responsible for all project implementation results.

Organizational chart of PMB is presented in the figure 2 as follows:

Figure 2 Organizational chart of PMB



2.1.2. Personnel of PMB

Personnel of PMB are proposed in the following table:

Table 7 Proposing personnel for PMB

Director Board	Accounting division	Planning Division	Technical Division	Total
2	2	1	1	6

2.1.3. Responsibilities of PMB

The PMB will be accountable for all sources of finance (loan, provincial budget and capital mobilization) as well as accountable for all other overall management of the project to make sure that the project will achieve its goals. Loan will be financed by financial institutions to the project through credit contract agreed with the project and the financial institution. Loan disbursement will be done in line with terms and conditions of the bank. The PMB is responsible for reporting to the provincial PC and related authorities if any problems happened with the disbursement progress to make sure that loan disbursement is done as scheduled.

Due to the nature of forestry work, financial source and labor source for constructing facilities and forest plantation, procurement of equipments and other necessary tools as well as establishing infrastructure will be completed within the first year of the project (2007). From the 2nd year (2008) until year 7th (2013), carrying out land preparation, planting, tending and protection according to plan (average annual area of plantation is about 180 ha). Tasks needed doing during forest planting period is the same so it is easy for the PMB to manage the project at this stage. The work will be changed from year 8- get ready for harvesting and making sales network for harvested timber as well as site preparation for the next forest plantation cycle. Therefore, PMB and implementing units should pay special attention to arrange sufficient personnel and other resources for busy time of the project. The project activities from 9th year to the end of project life will be the same with that in year 8th (2014).

The specific responsibilities of the PMB as follows:

- Responsible for overall project implementation and monitoring activities of related stake holders and investors based on signed contract or agreement;
- Establishing management mechanism including implementation units;

- Preparing project implementation guideline in order to achieve project objectives;
- Preparing annual works and annual capital needs from bank loan and government budget;
- Preparing and updating project procurement plan;
- Running accounting works, maintaining accounting diary and carrying out capital accounting in line with current legal framework;
- Taking a role of coordinating all project activities and project information;
- Coordinating with related agencies and partnerships in all project activities;
- Assisting credit agencies in term of silviculture for loan inspection.
- Implementing regular monitoring project progress;
- Providing up to date project information for issuing policies by relevant authority agencies (Provincial PC, Department of Planning, DAR, Department of Finance, and other credit agencies);
- Carrying out mid-term and final project evaluation on loan flow;
- Implementing other works directed by higher authorities;
- Making labour contract to participating households.

2.2. Production and protection teams of the Wetland Reserve

Production and protection team of the Wetland Reserve carry out forest plantation, tending and protection. They will receive payment based on man-day and specific work done. Number of workers participating in project activities will be assigned by PMB. It is proposed to establish a forest protection team with 10 people and a production team with 10 people. Those teams will carry out project works in the field and assist other implementation units under the monitoring of the PMB.

3. Related agencies and partners

3.1. Long An PPC

Long An PPC takes roles as governing body, and steers and directs relevant bodies in order to support the PMB.

- (i) Approving establishment of PMB;
- (ii) Providing general guideline on policy and orientation via DARD;
- (iii) Monitoring project implementation and dealing with arising issues via DARD and other related agencies;
- (iv) Considering and approving annual operational plan, annual project cost and budget disbursement plan during the assistance period;
- (v) Organizing dialogue between PMB and financial agencies for establishing credit program;
- (vi) Directing relevant agencies in dealing with arising issues through process of project implementation, especially those issues out of control of PMB.

3.2. *Department of Agriculture and Rural Development (DARD)*

DARD implements management of forestry within the province and supports PMB in terms of legal and technical issues as follows:

- (i) Coordinating with Tan Hung PC and PMB preparing guideline and other policy direction on technical field;
- (ii) Coordinating with related agencies in dealing with arising issues through the process of project implementation, especially those issues out of control of PMB;
- (iii) Supporting and providing information for PMB;
- (iv) Supporting forest plantation technique training requested by PMB.

3.3. *District and commune PC*

These organizations assist forest protection works and other local authority works in terms of social economic development.

- (i) Coordinating with DARD preparing guideline and policy direction on technical field to PMB;
- (ii) Supporting PMB in term of personnel for forest management, protection and anti- forest fire;
- (iii) Coordinating with DARD in monitoring project implementation and dealing with arising issues through process of project implementation, especially those issues out of control of PMB.

3.4. *Financial agencies*

3.4.1. Development Bank

Providing credit program for the project and directly getting benefit from loan service as follows:

- (i) Preparing financial mechanism in landing and collecting the loan;
- (ii) Carrying out loan management and evaluation;
- (iii) Coordinating with PMB, preparing cost table for project implementation and monitoring project finance.

3.4.2. State treasury

Providing government budget to PMB as the annual budget allocated by Provincial PC. Disbursing and managing government budget in accordance with law in force.

3.5. *Other related partnerships*

- a) Sub-FIPI II provides consultation and design of forest plantation to PMB.
- b) Thanh Hoa Forestry Centre provide high quality seedlings to the project.
- c) Can Tho University, Extension Centre: Providing consultation and training on project management and techniques.

- d) Other technical and material providers provide materials (fertilizers, pesticide etc.), equipments (pump, equipments for anti-forest fire etc.).
- e) Local communities provide labor force for planting, tending and protection.
- f) Forest planting units: Contracting with PMB for annual forest plantation works accordance with approved design profile and cost estimation, following the bid law.

II. PROJECT IMPLEMENTATION SCHEDULE

1. General project implementation schedule

The assistance period of the project lasts eight years. The main activities under each component and sub-component, along with their implementation schedule, are summarized in the table below. These schedules are indicative only, and may be subject to revision over the course of the project implementation

The first year is preparation period. All preparation works including basic infrastructure construction, materials and equipment procurement will be implemented. From the second to the eighth year, afforestation works will be carried out in the field.

Table 8 General project implementation schedule for the assistance period

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
Implementing year	1	2	3	4	5	6	7	8	9
Period	Preparation period	Operational period							
Components									
1. Production forest development									
1.1 Infrastructure construction									
1.2 Planting forest									
1.3 Harvesting									
2. Supporting production forest development									
2.1. Establishing PMB									
2.2. Consulting banks									
2.3. Technical training									
2.4. Management training									
2.5 Preparing plan (capital and implementation)									
3. Project management, monitoring and evaluation									

Project components will be implemented simultaneously. Thus, project staffs can carry out numerous works in integrative way.

In order to implement afforestation smoothly, preparation work in the year 2nd should be carried out thoroughly. From the third year, afforestation activities will be carried out in the field. It is noted that it is time consuming for establishing credit system with financial agencies. Thus, it is important to negotiate with financial agencies right after the project was approved.

2. Preparation period

It is important to consider three important points in the preparation period as follows:

- 1) Preparing project financial and credit mechanism ;

- 2) Establishing operational and management system including: (i) establishing PMB and implementation units; (ii) training for project staffs; and (iii) establishing partnerships with relevant agencies such as provincial agencies, private units in order to obtain support in term of policy, technique, materials, high quality seedlings, and to promote the link with market;
- 3) Preparing operational plan and financial plan for the whole project implementation period as well as preparing all necessary tools, technical guideline for trainings; and labor mobilization.

Schedule for the preparation period is presented in the Table 9 as follows:

Table 9 Implementation schedule for the preparation period

Step	Activities	Components	Month											
			1	2	3	4	5	6	7	8	9	10	11	12
1	Preparing credit plan with banks	Component 2-1												
	Consulting with financial agencies and banks													
	Designing detail loan contract													
	Preparing capital use plan													
2	Establishing PMB	Component 2 - 4												
	Issuing Decision of PMB establishment													
	Forming production teams (PIU) and operating project objectives													
3	Establishing project office	Component 2-4												
	Opening project account at the Treasury and Bank													

3. Operational Period

Infrastructure construction and equipment procurement will be implemented in the first year - 2007. From 2008 onward, afforestation activities accordance with forest cycle is presented in the Table 10. In the operational period, afforestation activities will be repeated many times in the field. Forest plantation will be carried out in the first year, then tending from the year 2nd to year 4th; forest protection activities are operated from year 1st to year 7th. The monitoring afforestation activities will be carried out every year.

Table 10 Cycle model of afforestation activities in the operational period

Step	Activities	Cycle for 1 ha model						
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1	Preparing detail afforestation plan							
2	Site preparation							
3	Afforestation design							
4	Distributing seedlings and fertilizer							
5	Planting							
6	Supplement plantation							
7	Tending							
8	Protecting							
9	Harvesting							
10	Monitoring and evaluation							
11	Preparing annual operational and budget plan							

Table 11 Monthly schedules for step 1 to step 11

Activities		Month											
		1	2	3	4	5	6	7	8	9	10	11	12
Step 1: Preparing detail afforestation plan													
	Revising seedlings and fertilizer procurement plan and ordering												
	Preparing training course for plantation groups												
	Preparing afforestation design and plan with design units												
Step 2: Site preparation													
Step 3: Afforestation design													
	Design												
Step 4: Distributing seedlings and fertilizer													
	Fertilizer												
	Seedlings												
Step 5: Tree planting													
Step 6: Supplement plantation													
Step 7: Tending													
Step 8: Protection													
Step 9: Harvesting													
Step 10: Monitoring and evaluation													
Step 11: Preparing annual operational and budget plan													

III. FINANCIAL MANAGEMENT

1. Financial sources

The project is invested by two financial sources: bank loan and provincial budget (Annual provincial budget come from two sources: provincial treasury and self-capital of the PMB). All bank loan and small part of provincial budget will be spent for afforestation activities and infrastructure construction. The remaining provincial budget will be used for the component 2 (Supporting afforestation) and the component 3 (management, monitoring and evaluation).

2. Bank loan for production forest plantation

The bank loan is borrowed from the Provincial Development Bank. Financial formalities follow policies and regulations in force of bank system. In order to manage the bank loan, a new account of PMB will be opened at the Provincial Development Bank

Budget will be disbursed via credit contract signed between PMB and the bank accordance with budget disbursement regulation in force including: infrastructure construction contract, material and service supplying contracts via annual bidding plan. Budget disbursement will be accordance with contracting progress and job done with inspection record by authority agencies.

The demand for bank loan is prepared based on the content of F/S report and annual activity progress. The capital need is prepared by PMB, and approved by authority agencies with agreement of the bank. The bank and financial agencies monitor the use of capital loan. Regular monitoring will be carried out by the group proposed by PMB including implementation units, financial agencies and other related partners.

Financial report will be prepared by PMB and sent to financial agencies for inspection monthly, quarterly and yearly. Yearly report will be prepared in January every year with data on bank loan recorded until December of the previous year. The report and table format is applied the template of the bank system. After that, the PMB will receive information on budget disbursement and loan repayment.

As the process of state auditing, at the end of each year the auditing group may visit and inspect the project. Depending on the real situation, auditing works may be carried out at any time in the year.

Table 12 Annual capital loan cycle

Activities	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Annual plan												
Submitting to the bank for inspection												
Signing credit disbursement contract												
Selecting implementing partners												
Signing operation contract												
Budget disbursement formalities												
Drawing the balance sheet (finishing budget disbursement)												

3. Provincial budget for PMB and supporting afforestation

Budget disbursement formalities are applied accordance with regulation of government budget management. PMB prepares annual budget demand plan, and submit to the Department of Plan and Investment, then get approval by Department of Financial Department. Finally, the plan is submitted to the provincial PC for allocating provincial budget.

After provincial budget is allocated, PMB works with the Provincial Treasury for budget disbursement. At this step, PMB needs to present system of vouchers such as procurement contract, operational, consultant and service contracts.

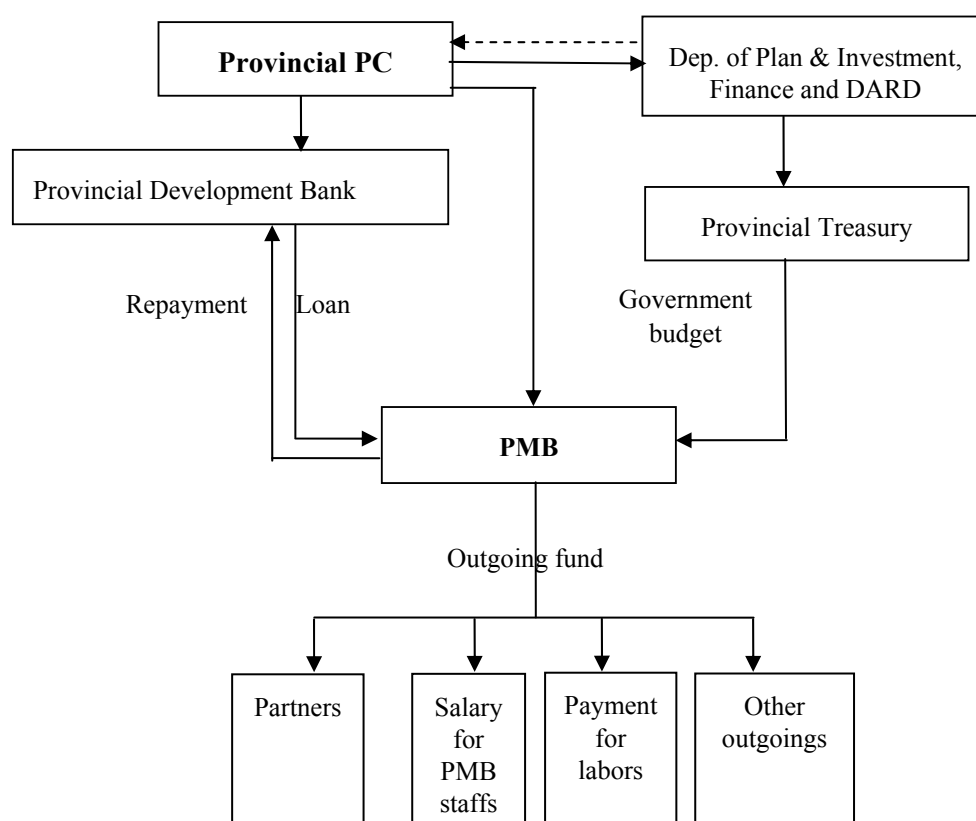
Following the process of balance drawing, PMB preparing the balance sheets submitted to Provincial PC for approving.

Following the state auditing process, at the end of each year the auditing group may visit and inspect the project. Depending on the real situation, auditing works may be carried out at any time in the year.

Table 13 Annual provincial budget cycle

Activities	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Annual plan												
Submitting related departments for inspection												
Summitting to Provincial PC												
Decision of Provincial PC												
Budget disbursement formalities												
Revising the plan												
Balancing												

Figure 3 Fund flow for production forest plantation



IV. PROCUREMENT MANAGEMENT

1. Procurement plan

In the project, goods to be procured including: seedlings, fertilizers, equipments for anti - forest fire and other services.

PMB has to follow procurement process state regulation in force. The Table 14 below presents procurement plan of the project including items for each component, procurement method and responsible agencies for procurement.

Table 14 Procurement plan

Items Components	Procurement	Goods Package	Procurement method	Responsible agencies
Component 1	Seedlings	Annual package	Direct procurement	PMB
	Fertilizer	Annual package	Direct procurement	PMB
	Consulting service for afforestation design	Unit	Direct contract	PMB
	Equipment procurement	Project package	Direct contract	PMB
	Service for carrying out infrastructure construction	Project package	Direct contract	PMB
	Forest plantation service	Annual package	Direct contract	PMB
Component 2	Consulting service for training (Technique, management, Finance, Accounting, market and sale	Unit	Direct contract	PMB
Component 3	Consulting service for monitoring and evaluation	Unit	Direct contract	PMB

2. Procurement flow accordance with approving process

Procurement contract above is applied bid law in force, including following steps:

- Preparing annual detail plan submitting to Provincial PC for approving and budget allocation
- Preparing bid plan and submit to Provincial PC for approving.
- Inviting for bidding.
- Collecting bid profiles.
- Bid committee consider and select a bidder.
- Presenting bid results to Provincial PC for approving.
- Signing contract with selected bidders.

Table 15 Process flow for procurement

Order	Proposed schedule	Activities	PMB	Providers	Notes
1	March to May 2007	Procuring anti - forest fire's equipments			PMB inform quantity of equipments to be procured. Providers then send their quotation and date for transferring. After that PMB select suitable provider accordance with bid law.
2	June 2007	Procuring seedlings and fertilizers			PMB inform quantity of seedlings and fertilizers to be procured. Providers then send their quotation and date for transferring. After that PMB select suitable provider accordance with bid law.

Table 16 Formality flow for services

Order	Proposed schedule	Activities	PMB	Providers	Notes
1	January to March 2007	Consulting service for designing infrastructure construction			PMB providing infrastructure construction plan. Based on the plan, providers prepare implementation plan. PMB select suitable provider accordance with the bid law.
2	January to March (2008 – 2013)	Consulting service for afforestation design			PMB providing afforestation plan. Based on the plan, providers prepare design profile. PMB select suitable provider accordance with the bid law.
3	January to March (2014 – 2019)	Consulting service for harvesting design			PMB providing harvesting plan. Based on the plan, providers prepare design profile. PMB select suitable provider accordance with the bid law.
4	April to August 2007	Service for carrying out infrastructure construction			Based on the approved design profile, PMB prepare bid plan. Bidders prepare tender document. PMB select suitable provider accordance with the bid law.
5	December to January (2008 – 2013)	Service for carrying out planting, tending and protecting			
6	June 2007 and December 2008	Training service			PMB provides training plan, sending invitation to Can Tho University and Extension Centre for training arrangement. Partners prepare cot estimation for each training courses and submits to Provincial PC for approving. PMB sign the implementation contract.
7	December of every year	Evaluation			Based on quantity of job done, inspection records on budget balancing, evaluation group evaluate project by comparing with indicators of project objectives and expected outputs.

V. SALES AND MARKETING PLAN

1. Overview on sales and marketing conditions

1.1. Demand and supply forest products

In Long An Province, Melaleuca logs are mainly sold to agent (intermediary business units) in the province and Ho Chi Minh City. Main market for Melaleuca is Ho Chi Minh City and surrounding provinces. The market promotion activities with business agents relate to direct users who carrying out construction work. Market for Melaleuca wood.

1.2. Sale price and product transportation cost

Products are sold with two modes: selling logs at the forest gate and selling standing trees.

- In case of selling logs at the forest gate, PMB will arrange harvesting. The average price is about 53,750,000 VND/ha. The cost for harvesting and transportation to the forest gate is about 7,425,000 VND/ha

- In case of selling standing trees at the plantation sites, all cost for harvesting, logging and transporting are paid. The price is about 46,325,000 VND/ha.

Table 17 Tentative plan for selling logs by year

Year	2014	2015	2016	2017	2018	2019
Implementing year	8	9	10	11	12	13
Yield (all types) (tree)	1,270,246	1,088,255	1,165,745	1,201,095	1,435,853	1,644,854
Melaleuca stakes - 5	757,328	648,824	695,024	716,100	856,064	980,672
Melaleuca stakes - 4	220,314	188,749	202,189	208,320	249,037	285,286
Melaleuca stakes - 3	292,604	250,682	268,532	276,675	330,752	378,896
Firewood (ster)	4,819	4,129	4,423	4,557	5,448	6,241

2. Sales and marketing flow

2.1. Identifying partners

In the process of marketing promotion and selling products, it is important to find out the role and function of each partner. In order to update market information, PMB is responsible for contacting potential partners for relevant information and then select the most profitable partners for establishing business accordance with in force law.

Based on the feasibility study results, potential partners for harvesting, transporting products are as follows:

- Producer (PMB).
- Intermediaries (log agents)
- Direct users

2.2. Product Sales and marketing flow

In the process of sale and marketing activities, it is necessary to consider the role and function of each potential partner relating to Melaleuca sale and marketing. Then, the flow chart of sale and marketing is prepared. The role and function of each partner are as follows:

a) Providers (PMB)

- Planting, tending and protecting as the plan of PMB;
- Researching on price of Melaleuca in the project area and surrounding zones;
- Researching on sale prices other species with similar function;
- Identifying potential users of Melaleuca;
- Provide information to potential consumers on market and production capacity in the project area.
- Preparing contracts;
- Preparing harvesting plan and log transferring plan to test the contract progress;
- Harvesting accordance with the plan;
- Direct sell log to agents/direct users;
- Monitoring log transfer process;

b) Intermediary/Users

(1) Intermediary (log agents)

- Collecting information from log users on quantity, specification, quality, price, location and transferring time, and providing the information to the producers.
- Collecting information from the producers on plantation area, location, quantity, specification, quality, and then providing that information to the log users;
- Pre-field assessment to check information;
- Negotiating to the users and the producers; signing contracts and implementing contracts: harvesting, transporting and paying to the producers;
- Receive payment of users (factories).

(2) Users

- Exchanging information on demand and supply to producers (PMB);
- Collecting information from the producers on plantation area, location, quantity, specification, quality, and then preparing log procurement plan;
- Surveying plantation sites where PMB intend to sell logs;
- Getting agreement from the producers on business condition such as price, specification, quantity, transferring logs
- Contracting with producers (PMB) on log procurement;
- Directly harvesting and settle payment to the producers;
- Settle payment to the intermediary after checking log quality and receiving logs.

In order to share information on market situation among partners, PMB will exchange information with agents on price, demand, transferring mode. After the final information exchange between PMB and intermediaries, agreement on log business based on exchanged information. Intermediaries starting negotiate with PMB to complete needed procedure such as conducting field survey, proposing log price, procurement mode, inspecting by related agencies, signing contract under approval of Provincial PC.

Table 18 Sales and marketing flow

Order	Partners Activities	PMB	Intermediaries	Users	Notes
1	Assessing market situation and potential market				PMB updating information collected in feasibility study period on market and log price.
2	Self assessing sites				PMB arranging checking sites and market on site area, quantity, specification of harvested products
3	Sale intention				PMB informs sale plan to intermediaries or users on area, specification of harvested products.
4	Exchanging log demand and supply information				PMB, intermediaries or users exchange information in demand/supply: specification, quantity, price, procurement mode, users' location.
5	Conducting field survey at plantation sites				Intermediaries or users check plantation sites which producers (PMB) intend to sell logs.
6	Negotiating business term				After checking plantation sites, intermediaries or users and producer (PMB) get agreement on procurement terms, specification and quantity.
7	Contracting sales				After agreement, the contracts will be signed among PMB and intermediaries and users.
8	Harvesting and transferring logs				Transferring products to intermediaries or users via selling standing trees or PMB arrange harvesting and then sell the products at the landing site.
9	Settling payments (2 ways)				- Users pay money to PMB. - Intermediaries pay money to PMB.

Notes:  Direct partners;

→ Direction of exchange

VI. TRAINING PLAN

1. Training needs

It is based on the project objectives, characteristics and conditions of the project area as mentioned in the F/S report; based on current regulations on using provincial budgets for training and workshops activities. Information collected during field survey show that PMB and other implementers need to be trained on management and afforestation technique.

The train program is necessary as the findings at the community meeting during the feasibility study period. Based on the results of previous community a meeting, the training needs focus on following area: project management and afforestation technique such as planting, tending and protecting.

2. The training plan on project management

Project management knowledge is the key factor for the success of the project. Organizing training courses on management for project staffs are necessary, it helps project is implemented as the plan and achieve it objectives.

The trainees will be staffs of PMB, producing group leaders and other staffs of the Wetland Reserve (about 20 trainees). It is planed to organize one eight-days training course in November 2007 at the office of PMB and visit some factories in Ho Chi Minh and Can Tho. The partners providing training course service are Can Tho University, DARD. Those partners will provide trainers and materials for training course.

3. The training plan on forest planting, tending and protecting technique

Afforestation technique is crucial as it directly affect on forest yield and the effectiveness of the project. Thus, it is necessary to organize training course on afforestation technique for project key actors such as workers in production teams, staffs of Lang Sen Wetland Reserve in order to enhance the yield of production forest as well as improve the effectiveness of the project.

The target trainees are workers of production teams and protection team of Lang Sen Wetland Reserve (about 30 people). It is planed to arrange a 6 day - training course and divided into 2 times. The first course is in October 2007, and the second course will be in June 2008. The location will be at the PMB office and project sites for practice.

The partners providing training service including Can Tho University, DARD, Extension Centre suppose to provide trainers, training tools and materials for training course.

Table 19 Tentative training plan

Course name	Objectives	Contents	No of course	Trainees	No of participants	Duration	Timing	Cost (million VND)	Instructors	Place
Project management	Enhancing capacity on management and marketing for project management staffs	Project management, marketing, including theory and study tour to project sites, wood processing ...	1	Staffs of PMB, producing group leaders and other staffs of the Wetland Reserve	20	8 days	Nov.	45,800	Can Tho University, Forestry Office	Project office, Ho Chi Minh City, Can Tho
Plantation and protection techniques	Enhancing capacity for actors who direct plant and protect forest on plantation and protection techniques	Melaleuca plantation techniques, monitoring methods, technical record. Training method comprise of theory and practice.	Divided into 2 rounds	Workers of production teams and protection team of Lang Sen Wetland Reserve	30	6	Oct. and Nov.	20,420	Forestry Office, Extension Centre	Project office

For laborers, which PMB mobilize from surrounding communities, Provincial Extension Office will be in charge of arrangement for training course. It is expected to have a bout 300 participants.

VII. MONITORING AND EVALUATION

1. Monitoring

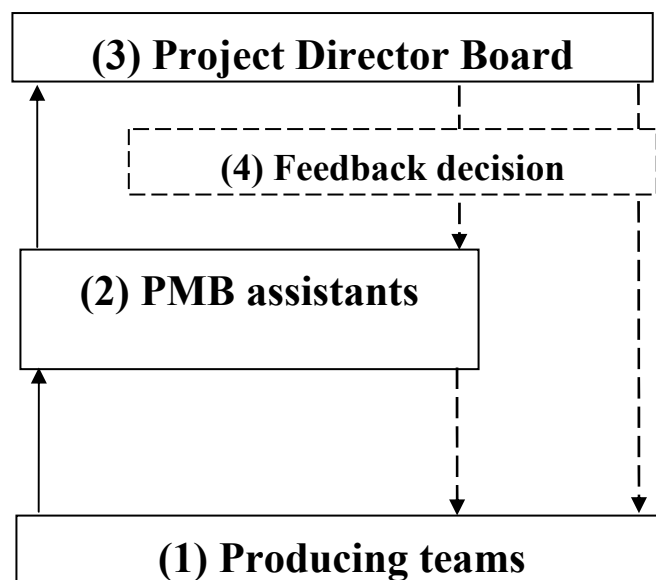
To evaluate progress and results of implementing work items in reality compared to the set plan at the beginning. Based on the evaluation results, adjustment solutions and supplements action will be introduced to ensure all job done as expected at highest effectiveness.

- General monitoring: PMB is responsible for these activities (planning and technical staffs).
- Field monitoring: planning or technical staffs of PMB or renting monitoring consultants.

Overall responsible for monitoring and reporting is belongs to PMB. Daily monitoring will be in charge of planning and technical staffs and producing workers. Those monitoring will be recorded in the regular record and report system with the consistent format. After completing each activity such as digging canal, training course, PMB will be informed and arrange checking the results; supplement action needed may be introduced.

Producing team of PMB will carry out regular monitor and cross checking implementation of the project and prepare progress report. Based on the monitoring results, PMB needs to have quick adjustment if needed, not waiting until the evaluation at the end of the year.

Figure 4 Proposed monitoring mechanism and information flow



The figure above illustrates the proposed M& E mechanism and it is explained that i) Producing team monitors field results and reports to PMB assistants, ii) PMB assistants checks received information, analyse and reports to project director board, iii) Project director board issues feedback decision and iv) Coordination activities are conducted with supporting agencies.

Main information and collected information is called progress indicator. As it is mentioned in the project design matrix, following indicators are established for monitoring the output of the project:

- (i) Plantation area (1,057 ha) is established by 2013 (Result 1);
- (ii) Capital loan is disbursed by 2008 (Result);
- (iii) Harvesting and sales plan is prepared by 2014(Result);
- (iv) Two training courses for project staffs will be organized (Result);
- (v) PMB is established by 2007 (Result);

2. Evaluation

Evaluation works aim to make necessary adjustment in the implementation process of the project, it will then draw lesson learns during project implementation.

There are two types of evaluation as follows:

- Job done evaluation (evaluating each activity such as infrastructure construction, equipment procurement, forest plantation, consultation service): Those activities will be monitored during the implementation process. When each activity completed as the contract, it will be evaluated by an independent evaluation committee. This committee is assigned by higher authorities and is approved by Provincial PC.

- Project evaluation: PMB rents independent consultants for evaluating project activities during project implementation and at the end of the project. Indicators for evaluating include:

(1) Objective of assistant period:

Establishing of 1,057 ha of Melaleuca plantation by 2013

(2) Project objective:

Over 1.3 million Melaleuca trees will be harvested annually by 2014-2019. Over 7.8 million Melaleuca trees will be harvested at the end of business cycle.

(3) Overall objectives:

By 2019, the turnover from the production forest in the buffer zone is 57 billion VND (2006 constant price basis).

From 2007 to 2013, all annual revenue from the project area will serve conservation purpose. From 2014 to 2019, 10% of annual revenue from the project will be spent on conservation activities (mainly for management and protection work).

The evaluation requires objective view. According to plan prepared in feasibility study report, an evaluation mission consisting of members of the third parties is to be established independently from PMB representing Long An DARD, Development Bank and Tan Hung Forest Protection Division. The table below present project monitoring and evaluation plan.

Table 20 Monitoring and evaluation plan

Description	Indicators	Evaluation methods	Information collection			Report preparation			Decision making		Submitting implementation decision	
			Collected by	Timing	Method	Report to	Timing	Method	Agencies	Timing	Timing	Method
Overall objectives	- By 2019, the turn-over reaches 57 billion VND - 10% of annual revenue from the project will be spent on conservation activities	Financial analysis report	Evaluation team	December, 1 time per every 3 year, from 2014 - 2019	Data collected at PMB	Provincial agencies	December	Synthesize and analyze data	Provincial PC	December to January every year	January of the following year	Evaluation report
Project objectives	From 2014 - 2019 harvesting over 1 million Melaleuca trees.	Annual harvest reports	Evaluation team	December, 1 time per every 3 year, from 2014 - 2019	Data collected at PMB	Provincial agencies	December	Synthesize and analyze data	Provincial PC	December to January every year	January of the following year	Evaluation report
Supporting objectives	By 2013 having 1057 ha plantation forest.	Implementation results report	Evaluation team	December, 1 time per every 3 year, from 2013	Referring data; Field survey	Provincial agencies	December	Synthesize and analyze data	Provincial PC	December to January every year	January of the following year	Evaluation report
Infrastructure and procurement	- Canal digging 85,613 m3 -4 pumps	Contract and inspection record	Evaluation team	The end of 2007	Referring inspection record and field observation	Provincial agencies	December	Synthesize and analyze data	Provincial PC	December to January every year	January of the following year	Evaluation report
Forest plantation	Total 1,057 ha is established by 2013	Inspection records	Evaluation team	At the end of 2008 - 2013	Referring inspection record and field observation	Provincial agencies	December	Synthesize and analyze data	Provincial PC	December to January every year	January of the following year	Evaluation report
Capital loan	Total loan value	Quarterly report of financial agencies				PMB	December every year from 2008 - 2013	Report analysis	PMB		January of the following year	Report

APPENDIX

Appendix 1: Overall project plan of the assistance period

Appendix 2: Afforestation plan

Appendix 3: Silviculture guideline

Appendix 4: Correlative proposal for project staffs

APPENDIX 1 Overall project plan of the assistance period

Overall project plan of the assistance period (2006-2013)

Year		2006	2007	2008	2009	2010	2011	2012	2013	Responsible person	Main partners participating the implementation process
Implementing year		1	2	3	4	5	6	7	8		
Activities	Expected outcomes	Supporting period	Operational period							PMB	Partners, PMB assistants PMB, consulting agencies, partners
1. Infrastructure construction	Digging 85,00 m ³ canal; Procuring and 4 pumps										
2. Production forest development	1,057 ha Melaleuca forest is established										
2.1 Preparing detail afforestation plan											
2.2 Site preparation											
2.3 Afforestation design											
2.4 Distributing seedlings and fertilizer											
2.5 Planting trees											
2.6 Supplementary plantation											
2.7 Tending											
2.8 Protecting											
2.9 Harvesting											
2.10 Monitoring and evaluation											

[illegible]

Year		2006	2007	2008	2009	2010	2011	2012	2013	Responsible person	Main partners participating the implementation process
Implementing year		1	2	3	4	5	6	7	8		
Activities	Expected outcomes	Supporting period	Operational period								
4. Monitoring and evaluation	Obtaining project implementation progress, making solutions in order to achieve project objectives									Evaluation Team, PMB	Evaluation Team, PMB

APPENDIX 2 Afforestation plan

Planting year: 2008

Compartment	Plot	Status	Area (ha)	Planting year	Species	No of seedlings	Harvesting year	Harvesting volume		Harvesting mode	Hauling mode	Average hauling distance (m)
								Melaleuca all types (tree)	Firewood (ster)			
1	a	Bare land	54.06	2008	Melaleuca	942,374	2014	398,963	1,514	Clear cutting	Carrying, pulling	250
1	b	Bare land	62.47	2008	Melaleuca	1.088,977	2014	461,029	1,749	Clear cutting	Carrying, pulling	250
1	c	Bare land	55.59	2008	Melaleuca	969,045	2014	410,254	1,556	Clear cutting	Carrying, pulling	250
Total			172.12			3,000,396		1,270,246	4,819			

Planting year: 2009

Compartment	Plot	Status	Area (ha)	Planting year	Species	No of seedlings	Harvesting year	Harvesting volume		Harvesting mode	Hauling mode	Average hauling distance (m)
								Melaleuca all types (tree)	Firewood (ster)			
2	a	Bare land	45.9	2009	Melaleuca	801,698	2015	339,406	1,288	Clear cutting	Carrying, pulling	250
2	b	Bare land	55.22	2009	Melaleuca	962,595	2015	407,524	1,546	Clear cutting	Carrying, pulling	250
2	c	Bare land	46.25	2009	Melaleuca	806,230	2015	341,325	1,295	Clear cutting	Carrying, pulling	250
Total			147.46			2,570,523		1,088,255	4,129			

Planting year: 2010

Compartment	Plot	Status	Area (ha)	Planting year	Species	No of seedlings	Harvesting year	Harvesting volume		Harvesting mode	Hauling mode	Average hauling distance (m)
								Melaleuca all types (tree)	Firewood (ster)			
2	d	Bare land	62.27	2010	Melaleuca	1,085,490	2016	459,553	1,744	Clear cutting	Carrying, pulling	250
3	a	Bare land	44.39	2010	Melaleuca	773,807	2016	327,598	1,243	Clear cutting	Carrying, pulling	250
3	b	Bare land	51.30	2010	Melaleuca	894,262	2016	378,594	1,436	Clear cutting	Carrying, pulling	250
Total			157,96			2,753,559		1,165,745	4,423			

Planting year: 2011

Compartment	Plot	Status	Area (ha)	Planting year	Species	No of seedlings	Harvesting year	Harvesting volume		Harvesting mode	Hauling mode	Average hauling distance (m)
								Melaleuca all types (tree)	Firewood (ster)			
3	c	Bare land	45.58	2011	Melaleuca	794,551	2017	336,380	1,276	Clear cutting	Carrying, pulling	250
3	d	Bare land	56.74	2011	Melaleuca	989,092	2017	418,741	1,589	Clear cutting	Carrying, pulling	250
5	a	Bare land	60.43	2011	Melaleuca	1,053,415	2017	445,974	1,692	Clear cutting	Carrying, pulling	250
Total			162.75			2,837,058		1,201,095	4,557			

Planting year: 2012

Compartment	Plot	Status	Area (ha)	Planting year	Species	No of seedlings	Harvesting year	Harvesting volume		Harvesting mode	Hauling mode	Average hauling distance (m)
								Melaleuca all types (tree)	Firewood (ster)			
5	b	Bare land	69,44	2012	Melaleuca	1.210.478	2018	512.467	1.944	Clear cutting	Carrying, pulling	250
5	c	Bare land	59,16	2012	Melaleuca	1.031.277	2018	436.601	1.657	Clear cutting	Carrying, pulling	250
5	d	Bare land	65,96	2012	Melaleuca	1.149.815	2018	486.785	1.847	Clear cutting	Carrying, pulling	250
Total			194,56			3.391.570		1.435.853	5.448			

Planting year: 2013

Compartment	Plot	Status	Area (ha)	Planting year	Species	No of seedlings	Harvesting year	Harvesting volume		Harvesting mode	Hauling mode	Average hauling distance (m)
								Melaleuca all types (tree)	Firewood (ster)			
4	a	Bare land	74.06	2013	Melaleuca	1,291,014	2019	546,563	2,074	Clear cutting	Carrying, pulling	250
4	b	Bare land	77.20	2013	Melaleuca	1,345,750	2019	569,736	2,162	Clear cutting	Carrying, pulling	250
4	c	Bare land	71.62	2013	Melaleuca	1,248,480	2019	528,555	2,005	Clear cutting	Carrying, pulling	250
Total			222.88			3,885,244		1,644,854	6,241			

APPENDIX 3 Silviculture guideline

Melaleuca cajuputi

Foundation:

- Decision of Ministry of Forestry (Now is MARD) No. 22/QĐ-KT dated on 3rd January 1987 issuing technical guideline for *Melaleuca* afforestation;
- Technical guideline (for planting *Melaleuca* and Eucalypts in sulphate acid soil area of Cuu Long River Delta, which issued by FSIV and JICA in 2002.);
- Data collected in the field of Long An province;

Long An PST prepares a technical guideline for *Melaleuca* afforestation in the project area as follows:

Main activities	Technical method	Detail description
I. Planting forest	1. Land selection	All area in the proposed project site is suitable for <i>Melaleuca</i> plantation. Surrounding area, <i>Melaleuca</i> forest growth well and produce high productivity.
	2. Vegetation treatment	- For grass area with the grass height of under 1 m, do not need to clear grass. - For <i>Phragmites australis</i> species, need to cut down or use machine to plough all shrub before flower season.
	3. Soil preparation	Making planting bed: help washing sulphate in the raining season and tree growth better. Specification of a bed: + Bed width: 6.5 m. + Gully width: 1.5 m. + Gully depth: 1 m.
	4. Seedling specification	- Seedling age: 12 - 18 months. - Seedling diameter 0.8 cm. - Seedling height: 0.8 m to 1.2 m. - Straight stem, there are no lower branches and scratch stem. - Main root length: 6 cm and longer, no breaking roots.
	5. Seedling treatment	After bulling <i>Melaleuca</i> seedlings, it is important to put seedling stump and root into water until new root appear to plant. - Place where treating seedling, need to have flowing and clean water and under the shade. - Do not tie seedling into a bundle into water.
	6. Transportation	It is planed to buy seedlings from Thanh Hoa Forestry Station. Seedlings will be transported to the project site vie small boat. It will take a day to transport seedlings from nursery to the project site.

	7. Planting	- Planting density: 0.7 X 0.7 m, or 15.840 seedlings per ha (excluding area for bed gully) - When planting, root of Melaleuca need to cling to the soil, avoiding root turn upside-down. - Planting season: the end of the flooding season (November to December). - After planting 2 months, need to check the survival rate and carry out supplement plantation.
II. Tending	1. Fertilizing	After 1 year planting, when root system develops robustly, it is time for fertilizing in 3 years continuously (from year 2nd to year 4th) 200 kg NPK per year; fertilizing one time at the beginning of the raining season (June and July).
	2. Thinning	When the forest canopy get closure, (about year 3rd), carrying out thinning, cutting down bad tree such as twisted tree, diseases tree ..., cutting lower branches. After thinning, the remaining space is 1 x 1 m. In the year 5th, can apply the second thinning and remain the density at the harvesting time is 7,000 trees per ha.
III. Protection	From the first year to harvesting year	Regularly patrol the forest to prevent forest fire, diseases, pests, destruction activities such as logging, against destruction from cattle. Following the anti forest fire issued by MARD under the decision No. 801-QĐ dated on 26th May 1986.
IV. Harvesting (Year 7th)	1. Cutting	- Applying clear cutting mode, cutting all Melaleuca tree in the stand. - Using large knife to cut tree, leaving the stump height of 5 to 10 cm. - Harvesting products: over 7,000 trees/ha. - Harvesting time: in the dry season, it creates favorable condition for coppiced regeneration. If harvests in the raining season, need to replant the forest.
	2. Hauling	Hauling logs to the landing site vie carrying or pulling by people or cattle. Average hauling distance is 150 to 250 m

APPENDIX 4 Correlative proposal for project staffs

1. Project management staffs

(1) Project director

Roles and responsibilities

- Managing and monitoring all project activities, ensuring to achieve project objectives;
- Regularly monitor project progress, evaluating project at the mid-term and the end of the project;
- Updating information on project implementation, and making decision needed at any levels;
- Carrying out other duties as assigned by higher authorities.

Requirements

- Holding a university degree, especially in forestry;
- At least 3-year experiences related to forestry;
- Wide knowledge on state institutions.

(2) Accountant

Roles and responsibilities

- Preparing financial procedure, managing finance and all outgoings and ingoing of PMB;
- Managing project account, checking and preparing accounting vouchers, storing and maintaining financial data, bank transferring and managing cash;
- Preparing and updating procurement plan; managing procurement including price negotiation, and arranging distribution of seedlings, fertilizers with local providers;
- Preparing annual budget plan;
- Reporting cash flow of the project;
- Carrying out other jobs assigned by project director.

Requirements

- University degree in financial field;
- Wide knowledge on accounting, procurement, and computer skills;
- At least 2 year experiences in the similar field;

(3) Planning and technical staffs

Roles and responsibilities

- Preparing annual plan;
- Preparing training courses for the project;

- Providing and assisting afforestation techniques;
- Assisting financial agencies on silviculture for annual loan evaluation;
- Checking equipment procurement, seedlings and fertilizer distribution, and monitoring project implementation;
- Reporting regularly on project progress;
- Carrying out other jobs assigned by project director.

Requirements

- Forestry degree in forestry;
- At least five-year experience in the similar position.

2. Producing teams

Roles and responsibilities

- Implementing project activities and monitoring in the field;
- Directly carrying out forest planting, tending and protecting activities;
- Reporting data to PMB assistant division;
- Carrying out other duties assigned by PMB;

Requirements

- Team leader and deputy - team leader have to hold vocational certificate on forestry or higher;
- At least 3-year experience in the similar position.

Training Package

Book 1:	Training Plan on Capacity Building for Preparing Feasibility Studies and Implementation Plans for Production Forest/Agroforestry Development Projects in Vietnam
Book 2:	Manual for Preparation of Feasibility Study Reports for Production Forest/Agroforestry Development Projects in Vietnam
Book 3:	Manual for Preparation of Implementation Plans for Production Forest/Agroforestry Development Projects in Vietnam
Book 4:	Model F/S of Thai Nguyen Province
	Book 4-1: Model Feasibility Study Report for Smallholder Production Forest Development Project in Thai Nguyen Province
	Book 4-2: Model Feasibility Study Report for Agroforestry Development Project in Thai Nguyen Province
Book 5:	Model IP of Thai Nguyen Province
	Book 5-1: Model Implementation Plan for Smallholder Production Forest Development Project in Thai Nguyen Province
	Book 5-2: Model Implementation Plan for Agroforestry Development Project in Thai Nguyen Province
Book 6:	Monitoring and Evaluation Report on Technical Training of Participating Provinces
Book 7:	Market Trend Reference Book on Wood-based and Agroforestry Products
Book 8:	Feasibility Study Reports of Participating Provinces
	Book 8-1: Feasibility Study Report on Agroforestry Project in Ta Hoc Commune, Mai Son District, Son La Province
	Book 8-2: Feasibility Study Report on Production Forest Establishment Project in Nui Thanh District, Quang Nam Province
	Book 8-3: Feasibility Study Report on Treatment of Exhausted Natural Forest and Production Forest Establishment Project in Da Teh District, Lam Dong Province
	Book 8-4: Feasibility Study Report on Afforestation Project for Serving Biodiversity Conservation in Long An Province
Book 9:	Implementation Plans of Participating Provinces
	Book 9-1: Implementation Plan on Agroforestry Project in Ta Hoc Commune, Mai Son District, Son La Province
	Book 9-2: Implementation Plan on Production Forest Establishment Project in Nui Thanh District, Quang Nam Province
	Book 9-3: Implementation Plan on Treatment of Exhausted Natural Forest and Production Forest Establishment Project in Da Teh District, Lam Dong Province
	Book 9-4: Implementation Plan on Afforestation Project for Serving Biodiversity Conservation in Long An Province