

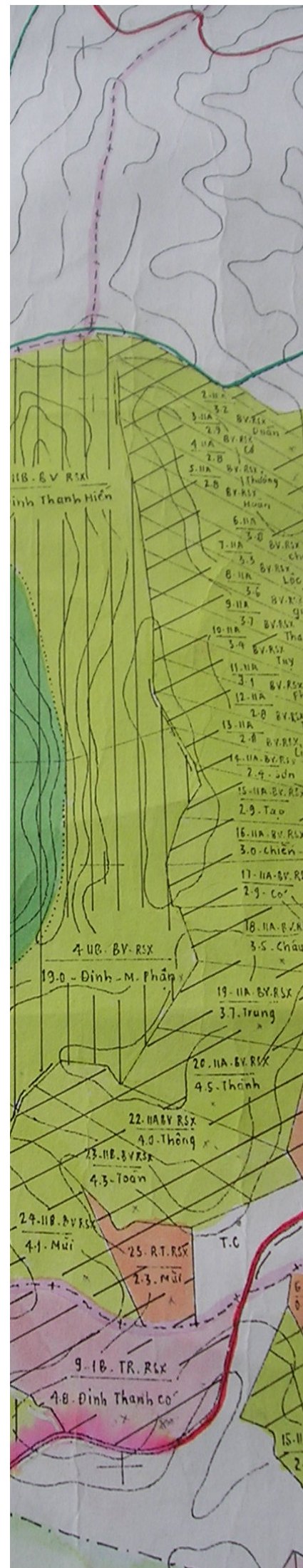
# Sustainable Management of Natural Resources in Central Vietnam



## Manual

## Participatory Land Use Planning and Forest Land Allocation

March 2006



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## Manual

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Marianne Meijboom and Vu Van Manh

March 2006



## Preface

This manual on participatory land use planning and forest land allocation is developed by the “Sustainable Management of Natural Resources in Central Vietnam” (SMNR-CV) project, which is supported by GTZ and implemented by GFA and DED. The manual has been tested in the field, in all villages of two communes, Thanh Thach commune in Tuyen Hoa district and Hoa Phuc in Minh Hoa district by the SMNR-CV. Lessons learnt from field implementation as well as lessons learnt from other projects are incorporated in this manual.

This manual is the first in its kind because it:

1. provides step by step guidance in applying participatory approaches during the PLUP-FLA process,
2. describes the allocation of forest land to groups of households and to entire villages
3. provides clear linkages to governmental policies and procedures

A previous draft of this manual was presented and discussed with stakeholders from the provincial, district and communal level during a workshop on the 7<sup>th</sup> of September, 2005 in Dong Hoi. We hope that this manual can contribute to the effective allocation of forest land to individual households, groups of households and/or to the entire village in order to ensure tenure rights with the aim to enhance both forest management and livelihoods of the poor who depend on the forest resources.

Sustainable Management of Natural Resources in Central Vietnam (SMNR-CV) Project  
6, Phan Chu Trinh  
Dong Hoi  
Quang Binh Province, Vietnam

Tel: ++ 84 52 840773  
Fax: ++ 84 52 840772

Email: [admin-qb@smnr-cv.org.vn](mailto:admin-qb@smnr-cv.org.vn)

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For the facilitation and implementation of PLUP-FLA in Thanh Thach commune in Tuyen Hoa district and Hoa Phuc commune in Minh Hoa district,, we would like to thank the Center of Forest Planning and Inventory in Quang Binh province Our sincere thanks go especially to the director of the FIPI center Mr. Nguyen Thanh Binh and the technical staff: Mr. Nguyen Van Tam, Mr. Bui Viet Cuong and Mr. Pham Thanh Trung.

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Furthermore we are grateful for the support of the involved local people and authorities of Hoa Phuc and Thanh Thach communes and Minh Hoa and Tuyen Hoa districts for their technical support and advice in the field.

Finally we also are grateful to Mr. Hans-Jurgen Wiemer and Mr. Tran Ngoc Lan of the SMNR-CV project for their backstopping support and Ms. Pham Thi Lien Hoa and Ms. Doan Thi Luong Hoa who carefully translated this manual into Vietnamese.

Marianne Meijboom and Vu Van Manh

## Abbreviations

CPC	Commune People Committee
CWG	Commune Working Group
DED	German Development Cooperation
DoNRE	Department of Natural Resources and Environment (at provincial level)
DPC	District People Committee
FAO	Food Agriculture Organization
FIPI	Forest Inventory and Planning Institution (at central level)
FIPI-QB	Forest Inventory and Planning Center in Quang Binh province
FLA	Forest Land Allocation
FPD	Forest Protection Department (at provincial level)
FPU	Forest Protection Unit (at district level)
GIS	Geographical Information Systems
GPS	Global Positioning System
GTZ	German Technical Cooperation
MARD	Ministry of Agriculture and Rural Development
MoNRE	Ministry of Natural Resources and Environment
NREO	Natural Resources and Environment Office (at district level)
NTFP	Non Timber Forest Product
PLUP	Participatory Land Use Planning
SFDP	Social Forestry Development Project
SFE	State Forest Enterprise
SMNR-CV	Sustainable Management of Natural Resources in Central Vietnam

## 1 Introduction

Forest resources are relative abundant in Quang Binh province and especially in the mountainous areas bordering Lao PDR where the “Sustainable Management of Natural Resources in Central Vietnam (SMNR-CV) Project” operates. In these areas local people depend on the forest resources for their livelihood. Therefore participatory land use planning (PLUP) and forest land allocation (FLA) is important to secure tenure rights over forest land resources with the aim to increase livelihoods and improve the management and protection of the natural resources. This manual provides practical guidance and elaborates step by step the procedures for PLUP-FLA necessary for the issuance of red book certificates for individual households and group of households. The manual does not elaborate on planning tools for economic sectors and the issuance of contracts (green book certificates) for households to manage forest land that belongs to State Forest Enterprises (SFE) and/or Protection Forest Management Boards.

This manual was tested in in the field in all villages of Thanh Thach commune in Tuyen Hoa district and Hoa Phuc in Minh Hoa district by the SMNR-CV project. Furthermore the manual includes lessons learnt from other projects and a previous draft of the manual was presented and discussed with stakeholders from the provincial, district and communal level in a workshop on the 7<sup>th</sup> of September, 2005 in Dong Hoi, Quang Binh province.

This manual for PLUP and FLA is based on the technical guideline on PLUP of the General Department of Land Administration, the recently issued decree 181/2004/ND-CP, Circular 29/2004/TT-BTNMT, Circular 30/2004/TT-BTNMT, the guideline on FLA of the Forest Protection Department (MARD) and methodologies developed by former projects supported by FAO and GTZ. Furthermore the manual incorporates information requested for by local stakeholders who are responsible for the implementation of PLUP and FLA in the field, including the Quang Binh Center of Forest Inventory and Planning (FIPI-QB), the districts' Natural Resource Offices (NREO) and the local authorities.

This manual is written for technical staff of organizations from the provincial and district level that support local villages with PLUP-FLA. These organizations are for example DONRE, DARD, and FIPI at the provincial level and the FPU, Economic Division and NREO at the district level. Furthermore the manual can be used by governmental organizations who will supervise the PLUP-FLA process in the field and by commune workers as a reference to get an overview of the PLUP-FLA process and the necessary procedures. The manual can also be used as reference document in PLUP-FLA training.

The manual consists of two parts and several appendices. The first part describes the methodology and each of the 7 PLUP-FLA steps in detail, including: Step 1. Preparation; Step 2. Assessment of current situation; Step 3. Development of land use plan; Step 4. Village FLA planning; Step 5. FLA in the field; Step 6. Compilation of cadastral documents; and Step 7. Appraisal and issuance of red book certificates. Part 2 gives practical guidance on the involvement of local villagers during the PLUP-FLA process. The appendices give background information and several table samples which are needed for the effective implementation of PLUP-FLA.

## **Basic principles and an overview of the steps in PLUP-FLA**

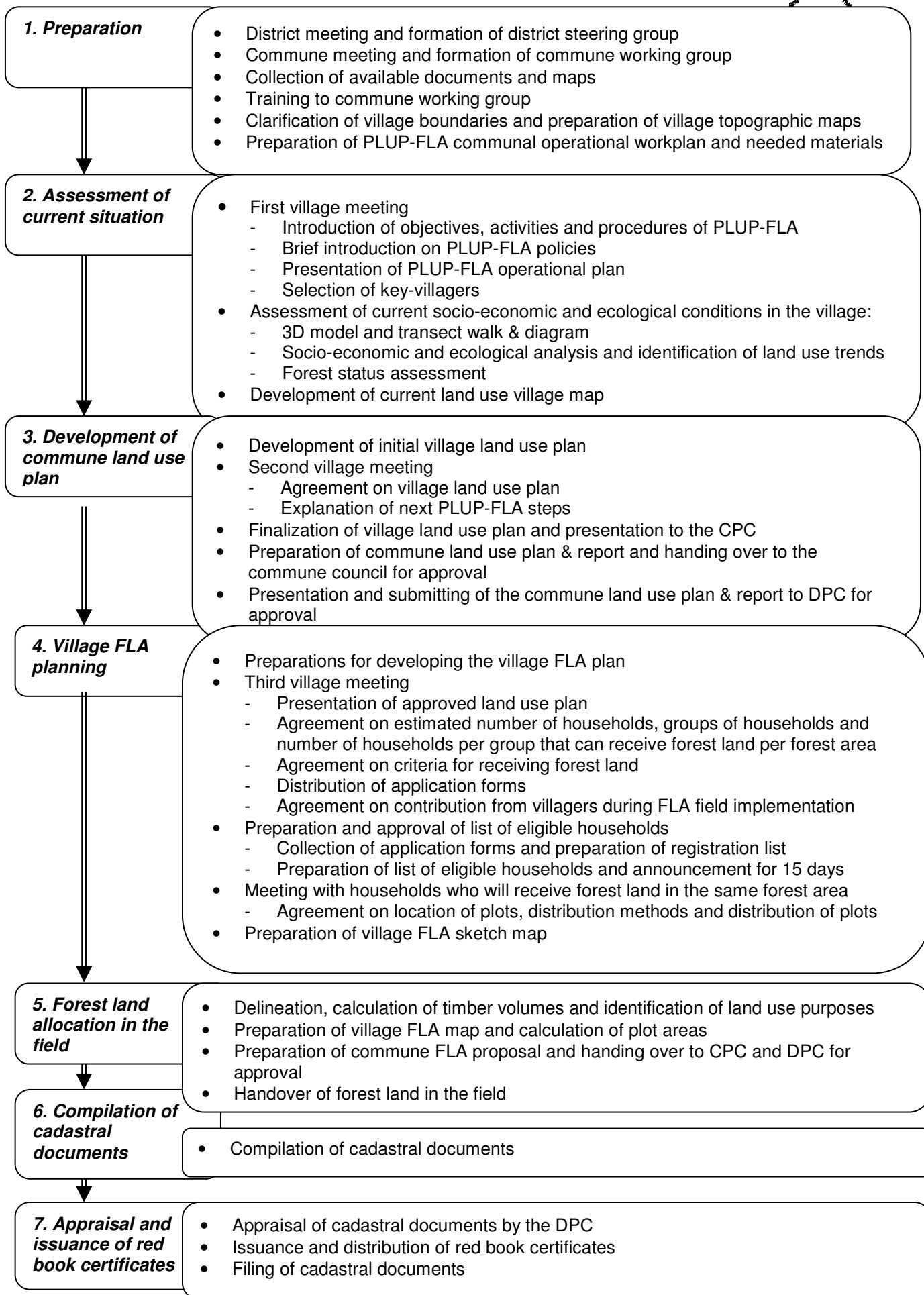
This manual on PLUP and FLA is based on the following principles:

- Harmonize government priorities for socio-economic development and environmental conservation with local community needs for food security and income generation
- Fit within the legal and administrative framework
- Fit and correspond to the provincial, district and commune socio-economic development plans
- Be simple and easy to be implemented with the local available resources at the commune and district levels
- Ensure equitable access to forest land and resources by all groups in the community (including women, ethnic minorities, the poorest and other disadvantaged people)
- Strengthen sustainable development of the whole commune and villages and ensure that no negative environmental impacts occur
- Be participatory and ensure that women, ethnic minorities, the poorest and other disadvantaged people fully participate in the PLUP and FLA process
- Be integrated with community development and consider all possible uses of the land (not merely focused on forestry and consider reforestation with timber species as the only management option)

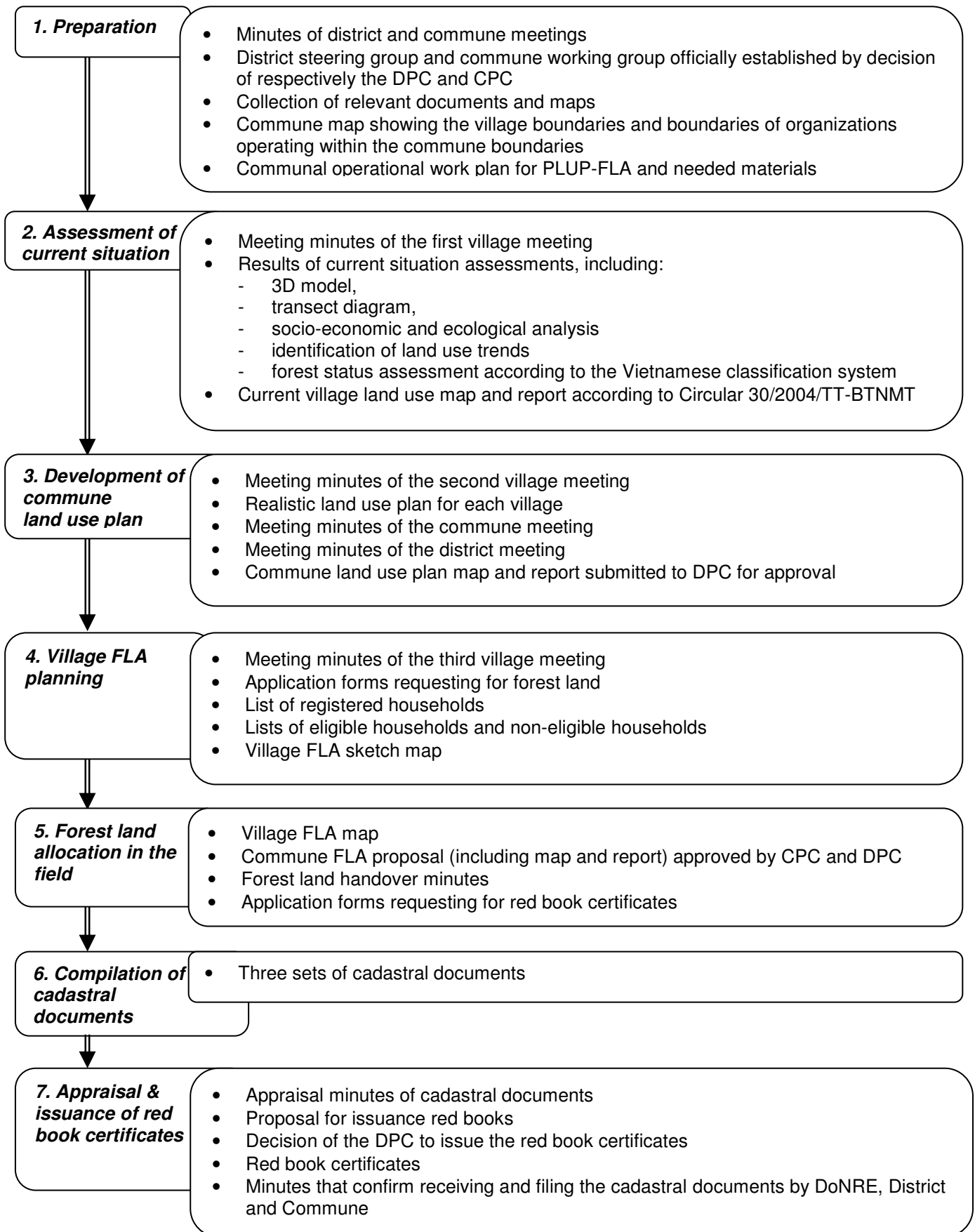
These basic principles should guide the PLUP and FLA process. Both an overview of the activities and outputs per step in the PLUP and FLA process are presented in respectively figure 1 and figure 2.

### **Role of professional staff**

Depending on the local situation, there are different organizations that can take the initiative and facilitate PLUP-FLA in the field. Professional staff of projects, from provincial and/or district organizations such as DARD, FPD, FIPI, FPU, NREO, and/or the Economic Division who support villages with PLUP-FLA should act as a facilitator to help villages to prepare their own land use plan which includes the plan for forest land allocation. It is of major importance that this plan is conform the interests of the entire village and that the interests of disadvantaged groups such as the poor, the elderly and women are incorporated in the plans. Long term objectives of FLA, such as improved forest management and strengthened livelihoods can only be realized if FLA is carried out according to the interests of all the villagers. The people who support PLUP-FLA should therefore ensure the participation of all groups during the whole PLUP-FLA process. Furthermore the role of the professional staff is to ensure that the PLUP-FLA is carried out according to Vietnamese law and follows the correct procedures and steps.



**Figure 1: Activities of Participatory Land Use Planning and Forest Land Allocation per step**



**Figure 2: Outputs of Participatory Land Use Planning and Forest Land Allocation per step**

## Part 1: Methodology: description of the 7 steps in PLUP-FLA

### 1.1 Step 1: Preparation

#### Activities in step 1: Preparation

1. District meeting and formation of district steering group
2. Commune meeting and formation of commune working group
3. Collection of available documents and maps
4. Training to commune working group
5. Clarification of village boundaries and preparation of village topographic maps
6. Preparation of PLUP-FLA communal operational workplan

During the preparation step a number of activities need to be carried out before the actual PLUP and FLA can be carried out. Each of these activities is briefly described below.

#### ***District meeting and formation of district steering group***

The following people should participate in the district meeting: the chairman or vice-chairman of the DPC and CPC's of the involved communes, Forest Protection Unit, Natural Resource Office, the Economic Division and representatives of State Forest Enterprises (SFE's), Protection Forest Management Boards, Special Use Forest Management Boards and other relevant organizations and the communal cadastral, agriculture and forestry staff.

The aims of the district meetings are:

1. To agree on the methodology for PLUP-FLA implementation (steps and activities) in the district and communes
2. To agree upon the organizational structure to implement the PLUP-FLA, including the formation of the district steering group and the commune working group. The District People's Committee (DPC) is requested to assign staff to both groups.
3. To assign persons responsible for the collection of relevant documents and maps.
4. Preparation of a draft working plan, which includes an overview of the communes where PLUP-FLA will take place and the general time schedule.

#### ***Agreement on the PLUP-FLA methodology***

The professional staff will give a presentation about the PLUP-FLA methodology. After this presentation the methodology can be further discussed and agreed upon by all participants of the meeting.

#### ***Organizational structure for PLUP-FLA implementation***

The formation of a district steering group is useful especially when PLUP-FLA takes place in several communes within the district. The district steering board has an advisory role to the DPC, is responsible for steering all work related to participatory PLUP-FLA, ensures compliance with national and provincial laws and regulations, and maintains close co-operation with concerned sectors at provincial level.

Members of the district steering board include:

- |   |                     |
|---|---------------------|
| • Chairman/vice-chairman of the DPC                   | - Head of the board |
| • Director of district's NREO                         | - Vice-head         |
| • Director of district's Economic division            | - Member            |
| • Director of district's Forest Protection Unit (FPU) | - Member            |

The above members work part time for the board and are responsible for activities related to their assigned discipline. Other organizations or institutes such as state forest enterprises, women union, management boards of parks/protection forests could in principal also participate in this district board depending on the capacity and specific situation of the district. However, the smaller the district board is, the more easy to organize.

Specific tasks of the district steering board are:

- Monitor the PLUP-FLA implementation in the field
- Assign district technical staff to join the commune working group
- Provide guidance for communes and professional staff
- Verify commune's PLUP-FLA

The DPC should issue an official decision on the establishment of the district steering board.

At the commune level a commune working group will be established responsible for all operational aspects of PLUP-FLA. The specific members will be elected during the commune meeting.

#### *Collection of relevant documents and maps*

The assigned person at the district level should ensure that the following documents are collected: District economic development master plan, sector plans (infrastructure, production areas, SFE's, Protection Forest Management Boards, Special Use Forest Management Boards, etc), Documents of relevant government projects/programs and other projects/programs in the area, administrative boundary map of the district, latest existing land use map, forest land allocation map and relevant government policies such as Decree 181/2004/ND-CP; Decree 163/1999/ND-CD; Decision 178/2001/QĐ-TTg; Decision 8/2001/QĐ-TTg; Revised Land Law 13/2003/QH11; Forest Protection and Development Law 25/2004/L-CTN, Circular 80/2003/TT/BNN-BTC, Circular 29/2004/TT-BTNMT, Circular 30/2004/TT-BTNMT, Quang Binh Provincial guidelines on commune land use planning for period 2005 to 2015 by DoNRE (if available). If these maps/documents are not available at the district, these can be obtained at DoNRE and/or other relevant organizations. These maps and document are essential for the preparation of the land use plan and forest land allocation plan.

*Meeting minutes should be written of the outcomes of this district meeting.*

#### ***Commune meeting and formation of commune working group***

After the district meeting, the first commune meeting (1/2 day) will be organized. Participants include people from the Commune People's Committee, village leaders, and representatives of SFE's, Protection Forest Management Board's, Special Use Forest Management Board's and other organizations if land within the commune boundaries falls under their jurisdiction.

The aims of this commune meeting are:

1. To present briefly the methodology (steps, activities, procedures) to be used for PLUP-FLA in the commune. (The professional staff will provide this presentation).
2. Formation of the commune working group responsible for the PLUP-FLA implementation on the commune.
3. To assign a person responsible for the collection of relevant documents and maps at the communal level (including demographic data and production data, administrative boundary map, land use plan map if available)

4. Development of a workplan specifying activities related to the clarification of commune and village boundaries and sequence of villages for PLUP-FLA implementation.

*Formation of commune working group*

The administration of PLUP-FLA is at the commune level, therefore it is recommended to carry out PLUP-FLA in all villages within the commune in the same time period and to establish a commune working group. The commune working group, responsible for all operational aspects of the PLUP/FLA process in the field exists of the following members:

- Chairman/vice-chairman of CPC -Head of the group
- Technical staff assigned from district level -Group member
- Commune cadastral staff -Group member
- Commune forest protection/agriculture and forestry staff -Group member
- Village leaders -Group member

Official approval from the CPC should be obtained to establish the commune group to strengthen the effective implementation of PLUP-FLA in the field. Appendix 1 provides a sample of a decision for the official establishment of the commune working group.

Meeting minutes should also be written of this commune meeting.

**Collection of available documents and maps**

The assigned responsible persons should collect the documents and maps as mentioned in the district and commune meetings. These documents and maps will be used in the next steps. The following documents and maps should be collected if available:

Documents:

- Data on current situation of land use and management (commune statistics)
- Demographic data and production data (commune statistics)
- District and communal socio-economic development master plans (if available)
- Sector plans (infrastructure, production areas, SFE's, Protection Forests Management Boards, Special Use Forest Management Boards, etc.)
- Documents of relevant government programs (such as the 5 Million Hectare Reforestation Program (Decision 661/1998/QD-TTg), and other projects working in the area)
- Relevant policies such as: Decree 181/2004/ND-CP; Decree 163/1999/ND-CD; Decision 178/2001/QD-TTg; Decision 8/2001/QD-TTg; Revised Land Law 13/2003/QH11; Forest Protection and Development Law 25/2004/L-CTN, circular 80/2003/TT/BNN-BTC, Circular 29/2004/TT-BTNMT, Circular 30/2004/TT-BTNMT, Quang Binh Provincial guidelines on commune land use planning for period 2005 to 2015 by DoNRE

Maps:

- Topographic map of the commune
- Administrative boundary map according to Instruction 364/1999/CT-TTg (from CPC, DPC or DoNRE<sup>1</sup>)
- Latest existing land use map (preferable according to Circular 28/2004/TT-BTNMT)
- Forest land allocation map according to decree 163/1999/ND-CP (if available)
- Forest classification map (production, protection and special use forest)
- Existing land use plan map and overall plans for socio-economic development of the district and commune (if available)

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<sup>1</sup> This map shows the approved administrative boundaries of communes, district and provinces

- Forest status map from FIPI-QB or Forest Protection Department (FPD) from 1999

### ***Training to commune working group***

PLUP-FLA is complicated and consists of many different steps. PLUP-FLA should be carried out carefully and using the 7 basic principles. Therefore, the commune working group members and the village leaders need to be trained in the PLUP-FLA process. This training gives a brief overview of PLUP-FLA and takes six days (one day theory and five days practicing PLUP-FLA planning in the field).

The theoretical part should be provided by the responsible professional technical staff in cooperation with the district steering group and covers the following contents:

- Basic principles of PLUP-FLA and its practical implications
- Steps, activities and procedures in the PLUP-FLA process
- Policies and decrees related to PLUP-FLA, including the guidelines for implementation of the land law (181/2004/ND-CP) and related policies, rights and benefits of households with allocated land (178/2001/QD-TTg) and options for FLA according to the revised Land Law (13/2003/QH11) and the Forest Protection and Development Law (25/2004/L-CTN). See Appendix 2 for an overview of relevant articles in forest related policies.
- Facilitation skills in order to develop the skills necessary to facilitate the village meetings (see Appendix 3)
- Use of equipment, such as compass and/or GPS

After the training the commune working group (including all village leaders) will implement PLUP & FLA planning in one village together with close support and coaching from the professional staff. This PLUP-FLA planning in one village will take about 5 days. The FLA activities in the field will mainly be carried out by the professional staff.

### ***Clarification of village boundaries and preparation of topographic village maps***

The administrative map of the commune (Instruction 364/1999/CT) shows the boundaries of the commune and also the areas that fall under the management of different organizations within the commune area. There are normally no disputes on the administrative boundaries of the commune. If there are conflicts these should be reported to the DPC, PPC and to the national level for clarification.

The boundaries between villages should be clarified to make clear which forestland can be allocated to which villages. Boundaries between villages do not need to be approved by relevant authority levels and are not considered as administrative boundaries. The village boundaries are based on land use customs and need to be accepted by all villages. The professional staff should organize a meeting and invite the chairman of the commune, the communal cadastral officer, the communal forest extension worker, all heads of the villages and representatives of all organizations with allocated land in the commune area. During this meeting the boundaries of all villages will be identified on the map. If all participants of the meeting agree upon the boundaries as identified on the map, the commune working group (including the communal cadastral officer) will mark specific points in the field (for example through poles) to make the boundaries visible in the field. It is important to mark the village boundaries in the field to avoid disputes in the near future. The cadastral officer and the professional staff should record the coordinates by GPS of these specific points that are marked in the field. Depending on the size of the commune, the number of villages and the number of points that should be marked in the field, the clarification of boundaries can take from one to ten days per commune.

The final commune map showing the village boundaries should be signed by all village leaders, the commune land registration committee and the chairman of the CPC. This map will be the basis for making the village maps. If possible the village maps for the fieldwork for PLUP-FLA should have the same scale as the commune map as regulated in Circular 80/2003/TT/BNN-BTC (see table 1), but should have a scale of at least 1:5,000. Mostly maps of a scale of 1:25,000 or even 1:50,000 are enlarged until the scale of 1:5,000 is obtained. However, the accuracy of a map with a scale of 1:5,000 derived from enlarging a map of a bigger scale is the same as the original map. Therefore these maps need to be updated with information from the field to ensure the accuracy of the map.

**Table 1: Commune map scales according to Circular 80/2003/TT/BNN-BTC**

<b>Commune area</b>	<b>Scale of commune map</b>
Less than 100 ha	1 : 1,000
100 to 500 ha	1 : 2,000
500 to 5,000 ha	1 : 5,000
5,000 to 20,000 ha	1 : 10,000*
More than 20,000 ha	1 : 25,000*

\* If the commune has forest land and unused land of more than 5,000 ha then a current land use map and land use plan map has to be developed of a scale of 1:10,000 or 1:25,000. If the commune has less than 5,000 ha of forest land and unused land than a scale of at least 1:5,000 is requested.

If maps are available from the interpretation of recent aero-photographs that are checked on the site and have been approved by the provincial authorities, these should be used for the preparation of detailed maps (scale at least 1:5,000). It is useful to make 3 copies of each village map for the land use planning activities in the next steps.

#### **Preparation of communal PLUP-FLA operational workplan and materials**

After the training, the professional staff and the commune working group will prepare detailed PLUP-FLA operational plans for all the activities related to the implementation of the PLUP-FLA, including the timeframe and budget for each village. This plan also outlines the organizational arrangements and clarifies if PLUP-FLA will be executed one by one village and the sequence of the villages, or that the commune working group will be split up in several teams to conduct PLUP-FLA in several villages at the same time. The commune operational plan is sent to the CPC for their consideration and approval and afterwards all the villages are informed about the plan. The diagram in figure 3 provides an overview of the activities and the estimated time needed to develop a village land use plan and can be used as tool for the preparation of the workplan.

The professional staff in cooperation with the commune working group will furthermore ensure that all equipment needed for PLUP-FLA is available such as stationery, copies of relevant documents, maps, compass, GPS, etc before PLUP-FLA takes place in the field.

	<b>Step 2: Assessment of current situation</b>		
	First village meeting – 2 hours (commune working group + representatives of all households in the village)		
<b>Day 1</b>	Collection of socio-economic data of the village (village leader)	Development of draft 3D model – ½ day (whole team)	Transect walk & identification of current land use – ½ day (whole team)
<b>Day 2</b>	Transect walk & identification of current land use – ½ day (whole team)	Transfer of field results on 3D model – ½ day (whole team)	
<b>Day 3</b>	Making current land use map – ½ day (professional + cadastral staff)	Calculation of areas per land use and filling in table (Circular 30) – ½ day (professional + cadastral staff)	
<b>Day 4</b>	Socio-economic & ecological analysis of current and potential land uses + identification of land use trends – ½ day (whole team)	Filling in tables about fulfillment previous land use plan (Circular 30) – ½ day (professional staff + cadastral staff + village leader)	
	<b>Step 3: Development of land use plan</b>		
<b>Day 5</b>	Discussions on draft land use plan – ½ day (whole team)	Preparation of land use plan map – ½ day (professional + cadastral staff)	
<b>Day 6</b>	Preparation of all tables and report - ½ to 1 day (professional staff + village leader + cadastral staff)		
	Second village meeting – 2 hours (commune working group + representatives of all households in the village)		

**Notes:**

1. Whole team includes the professional staff, members of the commune working group and selected key-villagers
2. If there is no previous land use plan the related activities in day 4 can be left out.
3. Detailed step by step guidelines about the above mentioned activities can be found in part 2.

**Figure 3: Diagram of a tentative time schedule to develop a village land use plan**

### Outputs of step 1: Preparation

1. Minutes of district and commune meetings
2. District steering group and commune working group officially established by decisions of respectively the DPC and CPC
3. Collection of relevant documents and maps
4. Commune map showing the village boundaries and boundaries of organizations operating within the commune boundaries
5. Communal operational work plan for PLUP-FLA

## 1.2 Step 2: Field assessment of current situation

### Activities in step 2: Assessment of current situation

1. First village meeting
2. Assessment of current socio-economic and ecological conditions in the village
  - 3D model and transect walk & diagram
  - Socio-economic and ecological analysis and identification of land use trends
  - Forest status assessment
3. Development of current land use village map

In this second step, the socio-economic and natural conditions of the village will be assessed in the field in order to get accurate and updated information about the actual land use in the field. The collected secondary data will be used as a reference. The field assessment will provide the necessary data for PLUP in the next step.

#### ***First village meeting***

After all the preparations are finalized the first village meetings can be organized to start the implementation of the PLUP-FLA process. It is crucial that during this first meeting, representatives of all households take part in the meeting (preferably at least 30% women). This meeting will take about ½ day. The aims of the first village meeting are:

- To explain the objectives, activities and procedures of PLUP-FLA
- To inform villagers about PLUP-FLA policies, especially about the duties, rights and benefits of PLUP-FLA
- To present the operational plan to carry out PLUP-FLA in the respective village
- To select a number of key villagers who will support the commune working group during the PLUP-FLA process in the village.

The village meeting should be organized by the commune working group in cooperation with the professional staff. This first meeting is very important and should be well prepared. Therefore the commune working group should discuss with the village leader in advance the contents of the meeting and prepare the venue and the agenda. The village leader can for example present the meeting contents while the professional technical staff can introduce the PLUP-FLA objectives, activities and procedures, and the options for FLA; as well as the policies related to PLUP-FLA and the rights and benefits of villagers. The village leader can further present the operational plan for the village and facilitate the selection of about 6 to 8 key representatives of the village to support the commune working group to develop the LUP-FLA plan. Key representatives of the village need to be selected carefully, based on a number of criteria, as for example:

- Good understanding of the village
- Respected by other villagers
- Motivated and interested
- Representing the interests of different groups in the village (the key representatives should thus include men and women, young and old, poor and better-off)
- Coming from different areas within the village

All villagers should agree with the selected key representatives.

During the meeting, there should be sufficient opportunities provided for villagers to ask questions related to PLUP-FLA. Someone of the commune working group should write the minutes of this first village meeting. (See part 2 for further details for the organization of the first village meeting).

### ***Assessment of current socio-economic and ecological conditions in the village***

Activities to assess the current situation in the village include:

- Development of a 3-D model,
- Transect walk and diagram,
- Socio-economic and ecological analysis,
- Analysis of the land use trends
- Forest status assessment

A 3-D model of the village should be an exact miniature copy of the village made by a mixture of clay and sawdust which can be kept and be used as a reference during the whole PLUP-FLA process. The 3-D model shows the infrastructure (road network), topography (hills, mountains, plains) residential areas, rivers and streams, agriculture crop areas, grazing areas, tree plantations, barren land, forests, etc distinguished by signs and colors.

A transect is a tool to better understand the current land use situation in the village. Transects are made by walking through the village area and consist of three parts: a walk to observe the features and land uses in the village, discussions with villagers and a diagram to record information about the land use systems.

The socio-economic and ecological analysis includes a comparison of different current and potential land uses and helps to make informed decisions on priority land uses for the future.

The analysis of the land use trends includes a brief description of the changes in land use over the last 5 to 10 years.

The forest status assessment should be carried out by an eligible organization such as FIPI in case of natural forest, and has to be according to the governmental classification system (see appendix 5).

See part 2 for step by step guidelines to make an assessment of the current socio-economic and ecological conditions in the village in participation with the local villagers.

### ***Development of current land use map and report***

The commune working group can prepare the first draft of the current village land use map and report based on the prepared 3D model and the outcomes of the current land use assessment. Information that should be included in the map are the boundaries of

different land tenures/occupants (boundaries of the village, boundaries of other subdivisions within the village, other administrative boundaries if present such as boundaries with SFE's , Protection Forest Management Boards, Protected Area's, etc., land allocated to households and organizations), area of agricultural land, non-agricultural land and unused land according to the different land use types as distinguished in the Land Law and also described in Circular 30/2004/TT-BTNMT.

The report about the current land use that is accompanying the map includes information about:

- Areas used for different purposes per land use type
- Land use changes over the past 5 to 10 years
- Analysis of land use changes per land type over the last 5 years
- Potentials and opportunities for land use in the future to increase sustainable management

Circular 30 /2004/TT-BTNMT provides detailed guidelines about the requirements for the current land use report and includes table formats that need to be filled in. This report will be part of the land use planning report. Some of these forms refer to the outcomes of the implementation of the previous land use plan and can only be filled in when a land use plan was prepared for the last time period.

For the forest status assessment, the forest areas need to be classified according to the Vietnamese classification system (see appendix 6 for the Vietnamese forest classification system. Only FIPI is eligible to make these forest status assessments for natural forests. For Quang Binh province, there is a forest status map of 1999 from which the timber volumes can be derived based on the forest status. However this map is not accurate and field checks are necessary to update the information.

Samples 2, 3 and 4 in Appendix 1 can be used for describing the forest areas and available timber volumes. The timber volume can be calculated based on the forest status while the official unit for calculating the bamboo volume is per 1,000 poles. These table formats are based on the Forest Land Allocation Guidelines by MARD for the implementation of 02/1994/CP (1996).

According to Circular 28/2004/TT-BTNMT, the commune has to prepare every year a current land use report and submit to the DPC. This Circular also provides the templates for the report and tables that need to be prepared every year.

The aggregation of the village maps and reports to the commune map and report will be done after the land use planning has been finalized. For practical reasons it is easier to complete both the assessment of the current situation and the development of a land use plan in one village first.

### **Outputs of step 2: Assessment of current situation**

1. Meeting minutes of the first village meeting
2. Results of current situation assessment, including:
  - 3-D model and transect diagram
  - socio-economic & ecological analysis of the village
  - identification of land use trends
  - forest status assessment according to the Vietnamese classification system
3. Current village land use map and report according to Circular 30/2004/TT-BTNMT

### 1.3 Step 3: Development of commune land use plan

#### Activities in step 3: Development of commune land use plan

1. Development of initial village land use plan
2. Second village meeting
3. Finalization of village land use plans and presentation to the CPC
4. Preparation of commune land use plan and report and handing over to the commune council for approval
5. Presentation and submitting of the commune land use plan and report to the DPC for approval.

The land use plan is the basis for developing a detailed FLA-plan and implementing FLA in the field. PLUP should be done very careful in a number of steps to avoid conflicts in the future. The land use plan should be based on the existing land use map, the 3-D model, the transect diagram, the socio-economic and ecological analysis, the identified land use trends and the forest status assessment of the village as prepared in the previous step to ensure that it is suitable and realistic under the present natural and socio-economic conditions.

In this manual, the following definition of PLUP is used:

*“Land use planning is the systematic assessment of the potential of land and the evaluation of alternatives for land use aiming at sustainable land use, improved land management and improved economic and social conditions. PLUP is carried out in a series of steps and is based on a dialogue and a balance of interest of all parties involved.”* (SFDP-Son La)

#### **Development of initial village land use plan**

The commune working group will support the key representatives of the village to draft their village land use plan. Activities related to the development of the initial land use plan include:

1. Identification of development goals and specific objectives to reach sustainable land use, improved land management and improved economic and social conditions in the village.
2. Selection of suitable land use options and identification of areas & location of each proposed land use practice in the village
3. Identification of forest land areas and location proposed for allocation to individual households, groups of households and/or entire village  
(See part 2 for step by step guidance to develop the initial village land use plan)

The goals and objectives set for the village should be based on the communal socio-economic development plan and based on the plans of organizations in different sectors for all the three types of land use (Agricultural land, non-agricultural land and unused land) recognized by the Vietnamese government. The objectives set for the village should be according to the law. For example, objectives set for forest land should be based on the type of forest land (production forest, protection forest and special use forest; see box 1). The areas belonging to these 3 forest types are identified at the provincial level. In general, only forest land earmarked as production forest can be allocated to individual households or groups of households, while protection forest land and special use forest land are in general managed by management boards (according to Decision 8/2001/QĐ-

TTg management boards have to be set up for special use forest and protection forest if the area is respectively larger than 1,000 ha and 5,000 ha). Also large areas of production forest are managed by State Forest Enterprises. These management boards can issue forest protection contracts or plantation contracts with individual households. Individual households are then paid on an annual basis for services rendered to the management boards. The number of households that will be or is contracted by the management boards depends on the plans of the respective boards.

**Box 1: Categorization of forestland into production forest, protection forest and special use forest (Law on forest protection and development)**

**Special-used forests**, which are mainly used for conservation of nature, specimens of the national forest ecosystems and forest biological gene sources; for scientific research; protection of historical and cultural relics as well as landscapes; in service of recreation and tourism in combination with protection, contributing of environmental protection, including:

- a. National parks
- b. Nature conservation zones, including nature reserves and species-habitat conservation zones;
- c. Landscape protection areas, including forests of historical or cultural relics as well as scenic landscapes
- d. Scientific research and experiment forests

**Protection forest**, which are used mainly to protect water sources and land, prevent erosion and desertification, restrict natural calamities and regulate climate, thus contributing to environmental protection, including:

- a. Headwater protection forests;
- b. Wind- and sand-shielding protection forests;
- c. Protection forests for tide shielding and sea encroachment prevention;
- d. Protection forests for environmental protection.

**Production forest**, which are used mainly for production and trading of timber and non-timber forest products in combination with protection, contributing to environmental protection, including:

- a. Natural production forests
- b. Planted production forests
- c. Seedling forests, including the selected and recognized planted forests and natural forests

For each area suitable land use options should be selected based on the outcomes of the transect walk & diagram, the socio-economic and ecological analysis and the forest status assessment; and the identified development goals and objectives for the village. Especially attention should be given to the need of local villagers for using agricultural land (including forest land and grazing areas), non agricultural land and the need to exploit the land classified as “unused land”. All options for land use should be considered and carefully assessed to select the best options reflecting the needs of the villagers (including women, ethnic minorities and other disadvantaged groups).

If forestland has been allocated in the past according to Decree 163/1999/ND-CP and red book certificates have been issued, the results should be assessed. If the actual use of allocated land is different from the intended use, (for example no management intervention because boundaries are unclear or households are not motivated to manage

the forest land) then realistic targets should be set to overcome this situation. There are mainly three options for forest land allocation:

- Allocation to individual households,
- Allocation to a group of households
- Allocation to the entire village

The best option varies per situation, culture and site of forest land, see table.

**Table 2: Advantages, disadvantages and suitable conditions for different modalities of forest land allocation**

	<b>Beneficiaries of forest land allocation</b>		
	<b>Individual households</b>	<b>Groups of households</b>	<b>Village</b>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>▪ Clear benefits &amp; responsibilities</li> <li>▪ High interest to invest resources</li> </ul>	<ul style="list-style-type: none"> <li>▪ Relative easy boundary demarcation</li> <li>▪ Shared protection</li> <li>▪ Reduced costs for management activities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Relative easy boundary demarcation</li> <li>▪ Shared protection</li> <li>▪ Reduced costs for management activities</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>▪ Protection is difficult</li> <li>▪ Demarcation and maintenance of boundaries</li> </ul>	<ul style="list-style-type: none"> <li>▪ Shared responsibilities and benefits</li> <li>▪ Lower interest to invest resources in forest development, management &amp; protection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Shared responsibilities and benefits</li> <li>▪ Lower interest to invest resources in forest development, management &amp; protection</li> </ul>
<b>Suitable situations</b>	<ul style="list-style-type: none"> <li>▪ Near residential areas</li> <li>▪ Relative small plot areas</li> </ul>	<ul style="list-style-type: none"> <li>▪ Relative farther from residential areas</li> <li>▪ Larger plot areas</li> <li>▪ Strong cohesion among group members</li> <li>▪ Available forestland in the village is limited</li> <li>▪ Forest land that hold resources of common interest to the group</li> </ul>	<ul style="list-style-type: none"> <li>▪ Relative farther from residential areas</li> <li>▪ Larger plot areas</li> <li>▪ Strong cohesion among villagers</li> <li>▪ Available forestland in the village is limited</li> <li>▪ Forest land that hold resources of common interest to the village</li> <li>▪ Necessity to keep forest land available for disadvantaged groups, future generations and immigrants</li> </ul>

The main advantages of allocation to individual household are clear responsibilities and benefits for the respective household, which motivates villagers to invest in their forest plot. Disadvantages include the high labor resources needed to protect the plot and to demarcate and maintain the boundaries. The major advantages of allocation to a group of households or village is the relative easy boundary demarcation (and/or use of existing ecological boundaries) and the reduced input needs per household for protection and management. However, the shared benefits and responsibilities can be a disadvantage and result in a lower interest of households to invest in forest development, management and protection. Forestland allocation to individual households might be the best option if the plot of forest land is relative small and close to the household and is easy to manage and protect on an individual basis. Allocation to a village or a group of households might be more suitable if the forestland is relative far away, if the available forest land is relative small and/or if the forest land holds resources or other common interests for the whole group or village (e.g. water sources that are used/managed by the entire group or village)

and cannot be allocated to organizations or individual households. Another reason to allocate forestland to an entire village can be to keep forest land available for people who are not able to manage a plot of forestland intensively but do need some forest products for their livelihood (e.g. the poor and/or elderly with limited labor resources and or for future generations and immigrants).

During the preparation of the initial land use plan, the areas & location of forest land that will be allocated to individual households, to groups of households and/or to the entire village have to be identified.

### ***Second village meeting***

This village meeting is of major importance as the village land use plan will be discussed. It is therefore recommended that all households in the village should be represented in this meeting (preferably at least 30% women). The meeting will take about ½ day. Aims of the meeting are:

- Agreement on the village land use plan including the general forest land allocation plan (location and areas to be allocated to individual households, groups of households and/or entire village)
- Explanation of next steps in PLUP-FLA

During the village meeting the results of the current land use assessment (including 3-D model, transect diagram, socio-economic and ecological analysis, forest status assessment, and land use trends) and the prepared village land use plan will be presented, discussed and agreed upon to ensure that the land use plan includes the views of all groups within the village (including women and ethnic minorities and other disadvantaged groups). If needed the land use plan will be adjusted and incorporate the comments made during this meeting.

The commune working group can refer to the lessons learnt in FLA in Quang Binh province to explain the identification of forest areas that will be allocated to individual households, groups of households and/or the entire village, see box 2.

After all villagers reach an agreement on the prepared land use plan, explain that the commune working group in cooperation with the professional staff will finalize the plan and submit and present it to the CPC and DPC for approval. If approval from the DPC is obtained, the FLA activities can commence.

See further part 2 for further details on the organization of this village meeting.

### **Box 2: Lessons learnt in Forest Land Allocation in Quang Binh province**

Prior to the issuance of the forest protection and development law (25/2004/L-CTN), it was not possible to allocate forestland to villages and therefore all forestland was allocated to individual households and/or organizations. In some cases in Bo Trach district, all forest land was allocated to a limited number of households because only a few household were interested in receiving forest land. This might create problems in the near future when all forestland is effectively managed and protected and households who did not receive forestland have no access to forest products for daily use (i.e. fuelwood). In general all households in a village, except those who do not want to take it should receive forestland. It is therefore important that the benefits and rights of forestland are very clearly explained prior to the actual allocation of land as well as the consequences and practical implications.

In some cases in Minh Hoa and Tuyen Hoa district forestland was allocated in long strips from land close to the household to over the hills. Sometimes these strips were 30 m wide and 5 km long. Allocation of long narrow strips of forest land might be a good option to promote equity but hampers the management and protection of the forestland located further from the household as boundaries are unclear and/or not maintained.

In some other cases several plots of forest land of different status have been allocated to individual households. In this case each household will have several plots at different sites. This method also takes equity as its major principle but complicates the management and protection of forest land in the field because boundaries of each plot are unclear and/or not maintained and a lot of time is spent on traveling to the different sites.

Based on lessons learnt in the field, the best practice for forest land allocation is to discuss first the current problems in forest management in the field and how these problems can be overcome before discussing who should get which plot of land. This will often result in forest allocation to individual households in areas that are located near residential areas, and forest land allocation to groups of households in areas that are further away and /or that are of interest to the entire village. For the actual land allocation, ecological boundaries (such as for example streams) or natural features (i.e. remarkable stones) should be used to demarcate plots in the natural forests as much as possible, because the establishment and maintenance of human induced boundaries is very time-consuming and complicated.

#### ***Finalization of village land use plans and presentation to CPC***

The commune working group and the professional staff will work together to finalize the village LUP and ensure that the maps and documents are prepared conform Circular 29/2004/TT-BTNMT, Circular 30/2004/TT-BTNMT and the Quang Binh Provincial guidelines on commune land use planning for 2005 to 2015 by DoNRE.

After all villages in the commune have finalized their village land use plan, all village leaders are invited to present their respective village land use plans to the CPC. During this meeting possible linkages in land use practices among villages will be discussed and agreed upon.

***Preparation of commune land use plan & report and handing over to the commune council for approval***

After the commune meeting the commune working group will combine all village land use plans and prepare the commune land use plan as stipulated by law (Circular 29/2004/TT-BTNMT, Circular 30/2004/TT-BTNMT and the Quang Binh Provincial guidelines on commune land use planning for 2005 to 2015 by DoNRE). This plan includes both a report and land use map.

The scale of the communal land use map depends on the commune area (see the previously shown table 1). The communal report includes a number of table formats as provided in Circular 30/2004/TT-BTNMT including an overview of the proposed changes in land uses and areas (tables 1, 2, 5, 6 and 7), the proposed areas that will be taken back by the commune authorities (table 8), the areas of unused land that are planned to be put into use (table 9), the list of land use areas defined according to function and purpose in the land use plan (table 10), the areas under current land use and at the end of the planning period of the land use plan (normally 5 years) per land use purpose (table 11) and the phases for implementing the land use plan, changing certain land use purposes, taking back land and bringing unused land into use (table 12 to 15). Apart from the report and tables describing the land use plan also a report needs to be incorporated about the current land use (see also Circular 30/2004/TT-BTNMT).

The report furthermore includes information about the forest status within the commune area and is an aggregation of the table formats 2, 3 and 4 as provided in Appendix 1.

After finalizing the land use plan map & report the commune working group will submit it to the commune council for approval.

***Presentation and submitting of the commune land use plan to the DPC for approval***

After obtaining approval from the commune council, the professional staff and the commune working group will present the communal land use plan to the DPC for their comments, suggestions and approval. In this meeting, representatives of the following organizations should participate: NREO, FPU, Economic Division, organizations managing land in the commune area and other relevant organizations.

The commune working group and the professional staff will modify the prepared land use plan according to the comments and suggestions made during the district meeting and submit it to the DPC for approval.

**Outputs of step 3: Development of land use plan**

1. Meeting minutes of second village meeting
2. Realistic land use plan for each village
3. Meeting minutes of commune meeting
4. Meeting minutes of district meeting
5. Commune land use plan map and report submitted to DPC for approval

#### 1.4 Step 4: Village FLA planning

##### Activities in step 4: Village FLA planning

1. Preparations for developing the village FLA plan
2. Third village meeting
3. Preparation and approval of list of eligible and non eligible households
4. Meeting with households who will receive forestland in the same forest area.
5. Preparation of a village FLA sketch map

##### ***Preparations for developing village FLA plan***

After the communal land use plan – including the areas & locations of forest land assigned for allocation to individual households, groups of households and/or the entire village - has been approved, the commune working group in cooperation with the key villagers can start with the preparations to develop a FLA plan. This includes:

- Preparation of topographic maps of the village
- Preparation of FLA communal operational plan
- Estimation of the number of individual households who can receive forest land per location
- Estimation of the number of groups of households who can receive forest land per location
- Estimation of the number of households that can participate in a group per location
- Field check
- Development of criteria for FLA
- Further preparations for the third village meeting

A transparency will be made of the current village land use map as prepared in step 2 (assessment of the current situation), which will be used as base map for the FLA fieldwork. In this base map also the forest locations and forest status is mentioned according to regulation 364 (FIPI). Color pencils should be used to add and distinguish on the base map the geological features such as streams, rivers, riverbeds, streamlets, hills, limestone areas, mountains, etc. The map should be as detailed as possible to ease the field work.

The FLA workplan outlines the timeframe per village and the sequence of the villages.

The commune working group and the key villagers will estimate the number of households, the number of groups of households and the number of households per group that are suitable to manage a certain area of forest land. A field check will help to make suitable estimations. These estimations are only an indication and will be agreed upon during the village meeting.

Criteria for FLA and the identification of eligible households and the identification of the location and size of the allocated land are for example:

- Location of household
- Former forestry activities at a certain site
- Dependency on forest land
- Number of main- and sub-laborers

These criteria will also further be discussed and agreed upon during the village meeting. Often the number of main and sub-laborers is considered as an important criterion because forest development, management and protection are labor intensive. However,

especially the poor who have limited labor resources depend often on the forest resources for their livelihood. These households should not be excluded from FLA as this might lead to the further impoverishment of the poor. Therefore, the dependency on forest resources should be a more important criterion. The maximum land area that can be allocated per household is 30 ha according to Decree 163/1999/ND-CD.

Further preparation for the third village meeting include the announcement of the meeting (time & place), the division of tasks among the commune working group and professional staff and the development of an agenda to structure the meeting.

### ***Third village meeting***

During this third meeting, all households that would like to receive allocated forest land should participate. The meeting will take about ½ day. The aims of the third village meeting are:

- Presentation of the approved land use plan
- Presentation of the benefits and rights of receiving forest land
- Agreement on the estimated number of individual households who can receive forest land per location
- Agreement on the estimated number of groups of households who can receive forest land per location
- Agreement on the estimated number of households that can participate in a group per location
- Agreement on the criteria for FLA
- Distribution of application forms
- Agreement on contribution from villagers during FLA field implementation

During the meeting the villagers will be reminded of their rights and benefits of receiving forest land.

The application form can be obtained from NREO or DoNRE and is included in Circular 29/2004/TT-BTNMT. The commune working group will explain during this meeting the application form and how it should be filled in.

It is expected that villagers are present during the FLA implementation in the field and delineate the plot boundaries. The CPC could also issue a regulation to mobilize villagers to support the FLA process in the field. (See further part 2 for detailed guidelines on the organization of this village meeting).

### ***Preparation and approval of list of eligible households***

The commune working group will collect all application forms and will prepare the registration list, which sums up the information from the application forms. It is useful to include the number of main labor and sub-laborers in this registration list to ease the preparation of the list of eligible households, especially if the number of laborers is considered an important selection criteria.

The commune working group will prepare the draft lists of eligible households and eligible group of households and the lists of non-eligible households and non-eligible households participating in groups. For the preparation of these draft lists, the commune working group will review the list of individual households registered to receive forest land and discuss the possibilities for land allocation to individual households. Depending on the criteria they will take into consideration the location of the household, accessibility of the forest land, the dependency of the household on forest land, the status of the forest land,

the available resources of the household (e.g. capital and labour) to determine the size and location of the forestland to be allocated. The lists of eligible households include the name of the household, the estimated area, the forest status, location and the use purpose. The required for the list of eligible households is included in Circular 29/2004/TT-BTNMT.

The commune working group will submit the list to the CPC and commune council for approval. After the list of eligible households has been approved by the CPC, the CPC will hang both the lists of eligible individual households and groups of households and non-eligible households at the CPC building and at the house of the village leader. The commune working group will announce to the villagers that the lists are available for all to see. The lists will be available for 15 days and within these 15 days villagers have the opportunity to see the results and make protests.

***Meeting with households who will receive forest land in the same forest block***

After the list of eligible households is finalized, it is clear who will receive forest land in which forest block but the exact location of the plot is not yet clear. Therefore the commune working group should organize a meeting with all individual households that will receive forest land in the same block. During this meeting the following will be discussed:

- Location of plots
- Mechanisms to distribute the plots
- Distribution of plots

Often the plots within a block are different in forest status and/or accessibility. Several households are therefore often interested in the same plot of land while no one is attracted to other plots. Therefore is very important to reach consensus about the mechanisms for distributing the plots. The best mechanism depends on the local situation and conditions. There are different mechanisms to divide the plots:

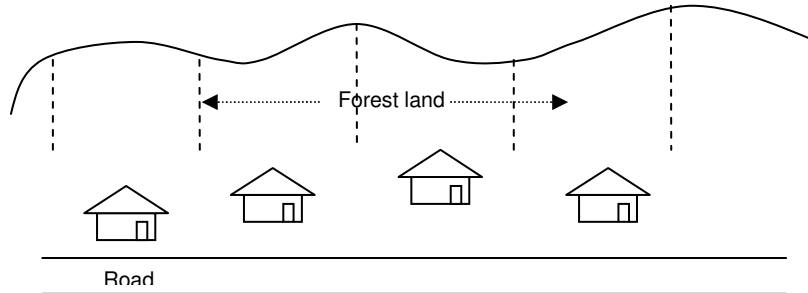
Discussion: The best mechanism for the distribution and identification of the location of the forest land is through discussion. Discussion should be the starting point but often consensus cannot be reached by discussion alone.

Equal distribution: an equal distribution often results in long narrow strips of forest land of similar size and similar status that are difficult to manage. This is only a suitable solution when households are located along the road and the strips are not too long and not too narrow, see figure 4.

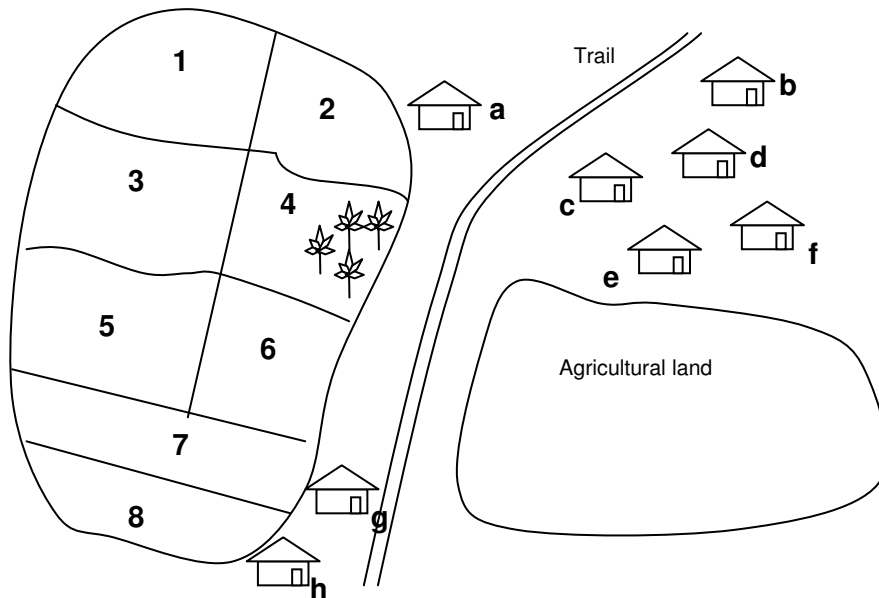
Drawing tickets: drawing tickets (all plots get a number, which is written on a small piece of paper and every household can pick a piece of paper) is an option when all households are entitled to a similar size of forest land. However it can lead to the situation that most households are not satisfied with the outcomes. Therefore households should be allowed to exchange tickets after the drawing if both sides agree. Drawing tickets is suitable when there are no clear linkages (in terms of access and/or former forest activities) between the households and the forest land.

Combination: A combination of the above described mechanisms is in most cases the best option. First identify existing linkages between households and the forest land in terms of access and former forest activities. Situations where a household receives forest land in the backyard of another household and/or where a household receives forest land where another household planted trees before should be avoided. In this way consensus can be reached over the allocation of a few plots. Depending on the situation, drawing

tickets and/or equal distribution of the plots can further resolve the distribution of forest land. See figure 5.



**Figure 4: Example of equal distribution of forest land**



In this example of forest land distribution, household “a” will receive plot “2”. Household “g” and “h” will respectively receive plot “7” and “8” because of their location. Household “d” will receive plot “4” because this household has planted some trees at this site in the past. The other plots “1”, “3”, “5” and “6” are distributed among the remaining households through a drawing system.

**Figure 5: Forest land distribution through discussion, equal distribution and drawing tickets**

If there are any conflicts among households about the plots of land to be allocated, this should also be solved during this meeting or in a separate meeting with the involved households and relevant authorities. After consensus is reached about the plot location in a forest block and distribution of the plots among the households, the households can start with the boundary demarcation in the field.

### **Preparation of village FLA sketch map**

The commune working group with support from the professional staff will develop FLA sketch maps for each forest area as described in the paragraph above. The same exercise will be carried out for the allocation of forest land to groups of households. The commune working group will make a sketch of all the information on a base map, showing the location and the name of the respective household. Activities related to the calculation of the plot area and the hand over of the forest land will be carried out in the next step.

#### **Outputs of step 4: Village FLA planning**

1. Meeting minutes of the third village meeting
2. Application forms requesting for forest land and list of registered households
3. Lists of eligible households and non-eligible households
4. Village FLA sketch map

## **1.5 Step 5: Forest land allocation in the field**

#### **Activities in step 5: Forest land allocation in the field**

1. Delineation, calculation of timber volumes and identification of land use purpose
2. Preparation of village FLA map and calculation of plot areas
3. Preparation of commune FLA proposal and handing over to CPC and DPC for approval
4. Hand over of forest land in the field

### ***Delineation, calculation of timber volumes and identification of land use purposes***

According to the FLA guideline of MARD (1996), the area and timber volume needs to be calculated and the exact location of the plot in the field needs to be known in order to show it correctly on the map. In Quang Binh Province, DoNRE does not yet make use of GIS data bases and GPS and all the measurements need to be carried out by hand using compass, slope-meter and measure-tape or theodelite.

A compass or GPS can be used to determine the standing position and to relate the point in the field to a point on the map. If a compass is used, it is easiest to determine the standing point at a site where the geographical features are easy to identify and to relate to the map. From there, one can relate sites that are further away and more difficult to recognize to the map. If the plot to be allocated can be related to the map, the direction, the slope and the length and wide of the allocated plot should be recorded. The length and wide is needed to calculate the size of the allocated plot, and additionally the direction and slope is needed to demarcate the allocated site correctly on the map. The size of a plot is calculated as if it was located on flat land (in reality the plot is often located on sloping land and the plot size is in reality larger), therefore the length measured on sloping land should be converted to calculate the corresponding horizontal image (see Appendix 5 for conversions).

The household and/or the group of households should be present in the field to help with the delineation and measurements of the plot and with the calculation of the timber volume. The household(s) should agree upon the present timber volume. The volume of timber should be calculated directly after the delineation in the field and is in general

derived from the forest status as mentioned on the forest classification map. The methodology to calculate timber volumes is further described in box 3.

**Box 3: Calculation of timber volumes in natural forests (>IIB) and plantations according to Decision 2961 NN-KHQH/QD issued in 1997 of FIPI**

The number of sample-plots to calculate the timber volume of plots located in natural forests (status of IIB and onwards) depends on the size of the allocated plot:

- For plots smaller than 1 ha: There is no need to calculate the timber volume separately, but the volume of adjacent plots with the same forest status can be used.
- For plots of a size between 1 ha and 3 ha: Calculation of timber volume through establishing one sample-plot.
- For plots larger than 3 ha (maximum 30 ha): Calculation of timber volume is carried out through 3 to 6 sample-plots.

In each sample-plot of 500 m<sup>2</sup> (20x25 m or round plots with a radius of 12.64 m), the DBH of all trees with a DBH >10 cm are measured and the height of 3 representative/average trees is measured. From the measured dbh the basal area (bsa) can be calculated by the formula  $bsa = \pi * (dbh/2)^2$ ; the timber volume of a single tree can then be calculated as follows: Volume = bsa\*height\*f (f is a correction factor and is 0.45 for natural forests and 0.5 for plantations). The timber volume of the sample-plot area can be calculated by measuring the volume of all individual trees and calculate the total sum of the volumes of all the individual trees.

The number of sample plots (100 m<sup>2</sup>) to calculate the timber volumes of plantations, depends on the age class of the stands:

- Age class I: No calculation of timber volumes, but only identification of tree species, year of plantation establishment, number of trees/ha (N/ha), average height (H), and an estimate of the diameter of the stem at ground level.
  - Age class II: 1% ratio of plantation area
  - Age class III and higher: 2% of plantation area
- (Number of sample-plots= size of plantation (in m<sup>2</sup>)\*0.01 (for age class II)/100 (m<sup>2</sup>))

The age class differs per species:

- Hard timber species characterized by very slow growth with age class cycles of 15 years: Lat hoa (*Chukrasia tabularis*), Lim, Sao Dau, etc.
- Hard timber species characterized by slow growth with age class cycles of 10 years: Gio, Xoan dao, Sau sau, Xa cu, etc
- Soft timber species and fast growing with age class cycles of 5 years: Mo, Thong, Sa moc, Phi lao, etc.
- Soft timber species and very fast growing with age class cycles of 3 years: Bach dan (*Eucalyptus*), Bo de, Keo (*Acacia*), Xoan, etc.

The timber volume is calculated in the same way as under natural forest. However in plantations the measurements of only one average tree can be used to calculate the total timber volume of the sample-plot (the sample-plot size in plantations is much smaller 100m<sup>2</sup> compared to 500m<sup>2</sup> in natural forests). See also Appendix 6.

Based on the existing volumes and status of the forest, the main functions and use options for the allocated plots can be identified. If the main function of the plot is

protection, this doesn't mean that no harvesting can take place. Harvesting of forest products for production forest with the main function of protection is limited to the extraction of NTFPs and thinnings to improve the forest stand.

**Preparation of village FLA map and calculation of plot areas**

After all the forest land has been delineated in the field, the professional staff in cooperation with the communal cadastral officer will prepare a FLA map of the village and calculate the plot areas. This map should have a ratio of at least 1:5,000. The following should be shown on this map: the numbers of forest unit and forest compartments and letters of forest plots (see box 4 for the division of forest areas on a map), the forest status according to FIPI, and the areas allocated to households, groups of households and organizations (including SFE's, Protection Forest and Special Use Forest Management Board's if present).

**Box 4: Division of forest areas according to Decision 8/2001/QĐ-TTg**

According to Decision 8/2001/QĐ-TTg forest areas are divided in forest units, forest compartments and forest plots:

Forest Unit is the largest unit and covers an average area of about 1,000 ha. Forest units are numbered from 1, 2, 3...n, within the province

Forest Compartment is the second largest unit. Each forest unit is divided in a number of forest compartments with an average size of 100 ha. Forest compartments are also numbered from 1, 2, 3 ...n. Forest inventories are carried out in forest compartments

Forest Plot is the smallest and is shown by a letter (a, b, c...z) on the map. The same forest status prevails in a forest plot. The forest status in forest compartments and/or forest units might differ.

The forest units, forest compartments and forest plots are numbered/lettered from North to South, and from West to East (top-down, left-right) on the map.

Mark the allocated land on the map of the different areas as follows:

- To individual households: areas are indicated by diagonal lines (45°), spacing 0.5 cm
- To groups of households: areas are indicated by vertical lines, spacing 0.5 cm
- To organizations (mass organizations, businesses or the military): areas are indicated by horizontal lines, spacing 0.5 cm

Of each of the individual plots allocated, the following should be indicated on the map:

Forest plot no - Forest status. Forest type  
Plot size (ha)-name of owner (husband and wife)

The forest status is shown on the map by its classification accompanied by two letters (for a description of the forest status see also appendix 5):

- Forest status IA, IB (barren land)-TR
- Forest status IC (recovery and regeneration forest)-KN
- Forest status IIA, IIB, IIIA1, IIIA2, IIIB or IV (rich, medium and poor forests)-BV

Furthermore, the forest types are indicated on the map as follows:

- S: Production forest
- P: Protection forest

- D: Special use forest

Thus for example a plot of allocated land of 15 ha, located in plot *a*, existing of a plantation on production forest land is notated as:

a- IB- TR. S  
15-Ho Van Hung/Ho Thi Nga

In cases where the plot size is too small to show all the necessary information on the map, several adjacent plots are combined into one, with a small explanation in the legend.

***Preparation of commune FLA proposal and handing over to CPC and DPC for approval***

The commune working group will check the village FLA maps to assess if it is in line with the formerly prepared commune land use plan. If the commune working group agrees with the results, the professional staff in cooperation with the commune cadastral staff will prepare a proposal for FLA in the commune, which includes:

- Communal FLA map (scale as stipulated in Circular 80/2003/TT/BNN-BTC). This map is an aggregation of the prepared FLA maps and shows the same information.
- List of households and groups of households eligible to receive forestland (including plot size, plot number (forest unit no, forest compartment no and forest plot no) timber volume and forest type
- Application forms requesting for forest land
- Form with data on the allocated forest land per plot (see sample 6 in Appendix 1)

The CPC will first assess the FLA proposal and send it further to the DPC for approval.

***Handover of forest land in the field***

When approval is obtained from the DPC, the handover minutes can be written and signed. The handover minutes should be signed by the team leader of the commune working group, the receiving household (s) and the village leader. The minutes include the names of husband and wife of the household who receives the land, the location (forest unit no, forest compartment no, forest plot no), the size of the plot, timber volume, and the main function of the forest land for management (see sample 7 in Appendix 1). The receiving household(s) of the forest land should only sign these minutes when they agree with the mentioned size, timber volume, and main function for management and when they know the boundaries of the allocated land. At the same time of writing the handover minutes the involved households will fill in and sign the application form to request for a red book. Both the minutes and the application form requesting a red book will be used for the further development of the cadastral documents.

**Outputs of step 5: Forest land allocation in the field**

1. Village FLA map
2. Commune FLA proposal (including map and report) approved by CPC and DPC
3. Forest land hand-over minutes and application forms requesting for red book certificates

## 1.6 Step 6: Compilation of cadastral documents

### Activities in step 6: Compilation of cadastral documents

1. Compilation of cadastral documents

The cadastral documents should be carefully prepared as these documents form the basis for the appraisal to issue the red book certificates. All the needed documents should be prepared and should correspond correctly to each other.

#### **Compilation of cadastral documents**

The cadastral communal staff will compile all the cadastral documents as described in Circular 29/2004/TT-BTNMT. This includes 3 sets of all the cadastral documents, including:

1. Communal FLA map (scale as stipulated in Circular 30/2004/TT-BTNMT).
2. Cadastral logbook
3. Reference list
4. List of households and groups of households eligible to receive forestland (including plot size, plot number (forest unit no, forest compartment no and forest plot no) timber volume and forest type
5. Record book for monitoring land use changes
6. Other documents prepared during the PLUP-FLA process including meeting minutes, minutes of handover of forest land, reports etc.

### Outputs of step 6: Compilation of cadastral documents

1. Three sets of cadastral documents approved by CPC

## 1.7 Step 7: Appraisal and issuance of red book certificates

### Activities in step 7: Appraisal and issuance of red book certificates

1. Appraisal of the cadastral documents by the DPC
2. Issuance and distribution of red book certificates
3. Filing of cadastral documents

The last step of the PLUP-FLA process includes the issuance and distribution of the red book certificates and to ensure that all the cadastral documents are well kept at the regulated departments.

#### **Appraisal of cadastral documents**

Once all the cadastral documents have been prepared and approved by the commune authorities, the documents should be sent to the District level. At the district level, the district PLUP-FLA steering board will form an assessment team. The assessment team will check in the field if the plot numbers correspond with the correct household owners, the size of the plots, the timber volumes and the suitability of the proposed forest use options. Furthermore the assessment team will also check if the boundaries are clear. At least 1/3 of the allocated forest land should be checked in the field. After the appraisal by the assessment team in the field, the Natural Resource and Environment Office (NREO) will further check and assess the cadastral documents. At least 30% of the provided documents should be checked in detail.

After the appraisal of the maps in the field and the related documents, the district PLUP-FLA steering board and the assessment team will meet each other and discuss the appraisal results. If the results are accepted, the final appraisal minutes will be written for the approval for the issuance of the red book certificates. Based on these appraisal minutes NREO will draft a proposal for the issuance of red book certificates for eligible households to the DPC. Together with this proposal, NREO will submit to the chairman of the DPC the following documents:

- List of households registered to receive allocated forest land
- Minutes of meetings and approval of the district assessment team and PLUP-FLA Steering Board
- Proposal of NREO for issuance red book certificates, including a list of eligible individual households and groups of households; and lists of non-eligible individual households
- Application forms for red books
- Red book certificates with the information as regulated (according to Decision 24/2004/QD-BTNMT), ready to be signed by the chairman of the DPC

#### ***Issuance and distribution of red book certificates***

Based on the information provided to the DPC authorities, the DPC will consider and prepare a decision on issuance of the land use right certificates (see Circular 29/2004/TT-BTNMT). . Based on this decision the DPC will sign the red book certificates for individual households, groups of households and/or organizations. The PLUP-FLA district steering committee will give these certificates to the respective commune working groups, who are responsible to distribute the red book certificates to the village leaders for further distribution to the respective individual households and groups of households.

It is important that both the names of husband and wife are written in the red book certificates. Red book certificates can be used to e.g. receive loans from banks. By noting down the names of husband and wife, both men and women can have access to loans from banks if desired.

#### ***Filing of cadastral documents***

The cadastral documents as prepared under step 6 and completed with the appraisal minutes, the proposal developed by the NREO and the decision on issuing the red book certificates by the DPC should be carefully archived for future reference and adjustment by different relevant institutions. Therefore 3 sets are made of all cadastral documents and archived by the following organizations:

- One set is kept by the Center for Cadastral Documents Archives of the Provincial Department of Natural Resources
- One set is kept by NREO for reference and adjustment in case of land use changes.
- One set is kept at the communal level by the cadastral staff for reference and adjustment in case of land use changes.

#### **Outputs of step 7: Appraisal, approval and issuance of red book certificates**

1. Appraisal minutes of cadastral documents
2. Proposal for issuance red books
3. Decision of the DPC to issue the red book certificates
4. Red book certificates
5. Minutes that confirm receiving and archiving of cadastral documents by DoNRE, District and Commune

**Part 2: Practical guidance to involve local people during the PLUP-FLA planning process**

	<b>Step 2: Assessment of current situation</b>		
	First village meeting – 2 hours (commune working group + representatives of all households in the village)		
<b>Day 1</b>	Collection of socio-economic data of the village (village leader)	Development of draft 3D model – ½ day (whole team)	Transect walk & identification of current land use – ½ day (whole team)
<b>Day 2</b>	Transect walk & identification of current land use – ½ day (whole team)	Transfer of field results on 3D model – ½ day (whole team)	
<b>Day 3</b>	Making current land use map – ½ day (professional + cadastral staff)	Calculation of areas per land use and filling in table (Circular 30) – ½ day (professional + cadastral staff)	
<b>Day 4</b>	Socio-economic & ecological analysis of current and potential land uses + identification of land use trends – ½ day (whole team)	Filling in tables about fulfillment previous land use plan (Circular 30) – ½ day (professional staff + cadastral staff + village leader)	
	<b>Step 3: Development of land use plan</b>		
<b>Day 5</b>	Discussions on draft land use plan – ½ day (whole team)	Preparation of land use plan map – ½ day (professional + cadastral staff)	
<b>Day 6</b>	Preparation of all tables and report - ½ -1 day (professional staff + village leader + cadastral staff)		
	Second village meeting – 2 hours (commune working group + representatives of all households in the village)		
	<b>After approval of commune land use plan &amp; report</b>		
	<b>Step 4: Village FLA planning</b>		
	Preparation for village FLA planning – 2 hours (whole team)	Third village meeting – 2 hours (whole team + villagers interested in FLA)	

1. Whole team includes the professional staff, members of the commune working group and selected key-villagers
2. If there is no previous land use plan the related activities in day 4 can be left out.

The above diagram shows the timeframe and activities to encourage the participation of the local villagers during the entire PLUP-FLA process. Below is a detailed description of all the mentioned activities.

## 2.1 Step 2: Field assessment of current situation

### *First village meeting*

The first village meeting will be organized by the commune working group in cooperation with the village leaders. This first meeting is very important and should be well prepared in advance. The commune working group and the village leader should discuss in advance who should present the different subjects on PLUP-FLA, and agree upon the person who will write the meeting minutes.

#### **Objectives:**

1. To explain the objectives of PLUP-FLA, activities and procedures
2. Brief introduction on PLUP-FLA policies, especially about the duties, rights and benefits of PLUP-FLA
3. To present the operational plan to carry out PLUP-FLA in the respective village
4. To select a number of key villagers who will support the commune working group to develop the village LUP-FLA plan with the aid of PRA tools (3-D model and transect)

**Time needed:** 2 hours

**Materials:** A0 showing the steps related to PLUP-FLA and its outputs (prepared in advance), A0 paper, markers, tape

#### **Steps:**

1. Welcome all the villagers and introduce the members of the commune working group.
2. Explain the objectives of the village meeting
3. Explain the objectives, activities and procedures of PLUP-FLA, making use of the figures of the 7 steps of PLUP-FLA and the outcomes of each step as described in the introduction of this manual. And explain which activities have already been carried out (e.g. the formation of the district steering group and the formation of the commune working group).
4. Explain briefly the legislation related to PLUP-FLA (see Appendix 1 for the most important policies and articles related to PLUP-FLA) and explain clearly the benefits and rights of people who have allocated forest land.
5. Present the operational plan for PLUP-FLA in the village and explain that for the next activities (the development of a 3-D model, transect, development of land use map, and development of a draft land use plan) the support of selected key representatives of the village is required.
6. Explain that the selected six to eight persons should be based on a number of criteria, such as:
  - Good understanding of the village
  - Respected by other villagers
  - Motivated and interested
  - Represent the interests of different groups in the village (the key representatives should thus include men and women, young and old, poor and better-off)Agree upon the selection criteria and let the villagers assign the persons. Ensure that all villagers agree with the proposed men and women who will support the commune working group in the coming activities related to PLUP-FLA. Discuss the time and place to start the follow up activities with the selected persons.
7. End the meeting and thank villagers for their participation.

### ***Development of initial 3-D model***

A 3-D model is a miniature model of the village showing its topographic characteristics such as: mountains, hills, rivers, streams, infrastructure and land use, etc. A 3-D model helps villagers to visualize their village and is therefore very useful as reference for further discussions about the current land use and land use planning. The 3-D model should be an exact copy of the village in miniature because it will be the basis for developing the current land use map. The calculation of the areas per land use system is derived from this map. The selected 6-8 key-villagers will prepare the 3-D model with overall support from the commune working group.

#### **Objectives:**

1. To develop a 3-D model of the village in miniature as a basis for further discussions for the current land use systems and land use plan
2. To have a basis for drawing up the current land use map that will be used to calculate the specific areas under each land use option

**Time needed:** 3 hours

**Materials:** A0 paper, markers, 3 village topographic maps (scale of at least 1:5,000), wooden frame (size 1m×1.5 m, 10 - 15cm high), color powder (5 colors, 100g each), clay and saw dust (a mixture of clay and sawdust, reduces cracking of the clay), small pieces of bamboo for marking important features and small pieces of paper for noting names of different areas.

#### **Steps**

1. Present the objectives of the 3-D model the exercise and the needed time. Explain that the participants are expected to make an exact model of their village in miniature based on their knowledge.
2. Mix the clay and sawdust (2:1) and put the mixture in the wooden frame. Start with making an outline of the village based on the topographic map and draw the boundaries of the village.
3. Continue by marking from memory the main features of the village, such as rivers, roads, residential areas, agricultural land, hills and mountains, etc.

The following questions can help the further development of the 3-D model:

- Where are north and south?
  - Where are the mountains and hills; and the rivers, streams and springs?
  - Where are the main roads, the residential areas, the main buildings and the cemetery?
  - Where are the agricultural land (rice fields and other crop land), barren land, tree plantations, grazing areas and forest land areas?
  - Are there any areas within the village that are classified as “Production”, “Protection”, and/or “Special-use” forests? Can you indicate the location and the boundaries of these areas in the 3-D model?
  - Can you identify the areas with different forest conditions (forest status)?
4. Adjust and refine the 3-D model and ask farmers if they can recognize their houses, agricultural fields, the roads they use, etc. Adjust the model according to the results of the discussions. Note down the areas where disputes arise and check these areas in the field during the transect walks.
  5. Complete the 3-D model by noting the names of major features and areas (mountains, rivers, residential areas, etc) on small pieces of paper pasted on the small bamboo

sticks and place them at the correct points in the 3-D model. Use color powder to mark the residential areas, tree plantations, natural forest, rice-fields, crop land, barren land, grazing areas, rivers, etc.

6. End the exercise and explain that this initial 3-D model will be updated with new information gathered during the transect walks. The 3-D model will be used as an important reference for developing the base map of the village and for the development of the land use plan.

### ***Transect walk & diagram***

A transect is a tool to understand better the actual land use in a village. Transects are done by walking through the village area covering either a part of or the whole village. A transect consists of three integral parts: a walk to observe the features and land uses in the area, discussions with villagers and a diagram to record information about the land use. By walking through the village area also new information may become apparent that will allow to adjust and to refine the 3-D model. After finalizing the transect walk & diagram, the 3-D model will be adjusted, refined and finalized and a base map will be prepared of the different land uses within the village area. The selected 6-8 villagers will make the transect walk & diagram with overall support from the commune working group.

### **Objectives**

- To identify the different land use types and their characteristics
- To evaluate and assess the potential and effectiveness of land use
- To identify opportunities for future land use

**Time needed** 3 hours

**Materials** A0 paper, markers, blank transect diagram forms, 3-D model, topographic map (base map), pens, GPS for checking boundaries, list of information needed to update the 3-D model

### **Steps**

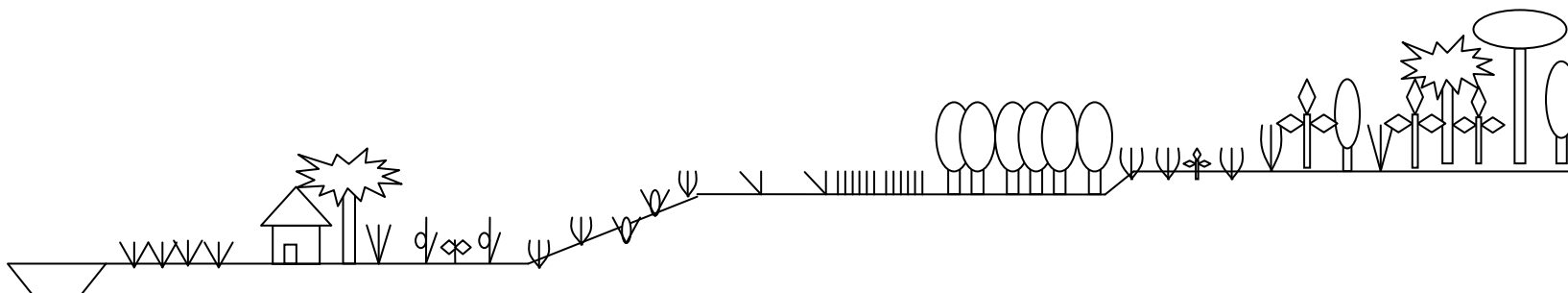
1. Present the objectives of a transect and the required time. Explain that the villagers are expected 1) to make 2-3 walks through the village, 2) to hold discussions with villagers, 3) to record information in the transect diagram and 4) to note down the needed information to update the 3-D model
2. Identify 2 or 3 walks through the village area for the transect. These walks should cover and cross all major land use forms as identified in the 3-D model and also cover the unclear boundary areas.
3. Explain the transect diagram and explain the list of information that should be collected to complete the 3-D model. The different land uses should be written in the first row of the transect diagram and land use information needs to be collected, including:
  - Name of location: the local names of the area in the village that correspond to the land use
  - Soil & water: very brief descriptions about soil & water conditions
  - Slope: steep, moderate, gentle slope or flat
  - Crops, flora and fauna: list the agricultural crops or the dominant and important plant and animal species
  - Land tenure: who is using the land? Is their tenure secured?
  - Management: which management practices are used?

- Potentials & best practices: which land use gives the best result on this land use system, what are the potentials for improvement?
  - Problems: what are the major problems encountered?
  - Opportunities and solutions: what are the opportunities and solutions to overcome the identified problems and achieve higher potentials?
4. Divide the participants into 2 or 3 groups (depending on the number of walks) each group walking a transect, and agree on a time and place to meet again.
  5. Walk the transect, asking villagers they meet about the local names of areas, current land use, land tenure, management, potentials and best practices, opportunities and solutions. Document the information on the transect diagram.
  6. Where the boundaries of current land use practices are unclear (as discussed in preparing the 3D model) check them in the field using GPS.
  7. Go back to the meeting room and discuss the results of the transect walks and prepare a final transect diagram.
  8. Modify and finalize the 3-D model, (including the names marked on bamboo sticks) with the new, updated information collected during the transect walk. The 3-D model should become like an exact miniature copy of the village.
  9. Explain that the professional staff and the cadastral staff will further develop the current village land use map and fill in the information in tables according to the government regulations. The support of the key-villagers is again required for the socio-economic & ecological analysis after the map and tables are finalized.

**Note:**

In practice this exercise is done in two parts. The first part is the explanation of the transect and the transect walk, the second part is to come back to the meeting room to present and finalize the transect diagram, to modify the 3-D model

**Transect diagram**



	<i>Water</i>	<i>Rice field</i>	<i>Residence &amp; home garden</i>	<i>Other crop land</i>	<i>Up-land cultivation</i>	<i>Barren land</i>	<i>Grass land</i>	<i>Plantation</i>	<i>Shrub-land</i>	<i>Regenerated forest</i>	<i>Natural forest</i>
<i>Name of location</i>											
<i>Soil &amp; water</i>											
<i>Slope</i>											
<i>Crops, flora &amp; fauna</i>											
<i>Land tenure</i>											
<i>Management</i>											
<i>Potentials &amp; best practices</i>											
<i>Problems</i>											
<i>Opportunities &amp; solutions</i>											

### ***Preparation of current land use map, calculation of areas and filling in of tables***

The current land use map, the calculation of the areas under each land use practice and the transfer of the acquired data in tables is the task of the cadastral staff in cooperation with the professional staff.

#### **Objectives:**

1. To prepare a village land use map
2. To calculate the areas and fill in the tables related to current land use areas according to Circular 30/2004/TT-BTNMT

**Time needed:** 1 day

**Materials:** Village topographic map, color pencils, 3-D model, Circular 30/2004/TT-BTNMT

#### **Steps**

1. Prepare a current land use map based on the final 3-D model, use pencils to draw the boundaries of each unique land use area, such as paddy land, cash crops, barren land, tree plantations, secondary forests, natural forests, etc.
2. Check the boundaries of each land use area by using the information collected during the transect walk (map and GPS data). It is important that this current land use map is accurate, therefore this map could be checked again in the field and be modified accordingly, if the boundaries were not clear.
3. Color each land use area on the map, using a distinctive color
4. Calculate the area of each unique land use by drawing squares on the current land use map, (at a scale of 1:5000, a 2 x 2 cm square is equal to 1 ha). Write the area of each zone on the map.
5. Fill in the tables related to the current land use areas as provided in Circular 30/2004/TT-BTNMT

#### **Note:**

The calculation of the areas for the different land use practices can also be carried out by project staff using GPS in the field. It takes about 2 days to get accurate data about all the land use practices in the village.

### ***Socio-economic & ecological analysis and identification of land use trends***

The analysis of the socio-economic & ecological conditions and the identification of the land use trends of the village is important for the development of a suitable land use plan and to optimize the land uses. This analysis will be carried out by the key-villagers with support from the commune working group and professional staff.

#### **Objectives:**

1. To analyze the demographic data
2. To make a cost-benefit analysis of the different present and potential land use practices
3. To identify the ecological impacts of different present and potential land use practices
4. To analyze the existing level of social equity to land access
5. To identify land use trends

**Time needed:** 3 hours

**Materials:** Copies of the cost-benefit analysis and ecological impact sheets as provided below (one copy for each main land use practice), A0 paper, markers

**Steps:**

1. Ask the village head to provide the statistical data of the village including: village population, population growth rate, number of men and women (labourers), number of better-off households, number of medium households, number of poor households, ethnic minorities, data about different kinds of agriculture crops with their respective areas, productivity (local potential production in kg per ha) and production (actual production over the last year in kg per ha), average food production per capita per year (rice equivalents<sup>2</sup>), land tenure ship and data about animal husbandry.
2. Discuss if these data reflect the actual situation in the village. If not, adjust the data and interview some more villagers if necessary.
3. Analyze the demographic data and assess if the population in the village is growing, stable or declining. If it is expected that the population will grow over the coming 5 years, areas should be set aside for new house construction and arable land. Discuss the location and area that needs to be set aside for the growing population (if available).
4. Make a cost benefit analysis of the major land uses in the village. List the crops, agro-forestry systems, tree species, etc that should be analyzed. List of each crop/tree species/agro-forestry system the costs such as labour, seeds/seedlings, fertilizer and other inputs and list also the revenues including the yields of main and by products. Fill the data into the CBA sheet and also state the time period from the start to the end (harvesting time), which can range from a few months (e.g. peanuts) to a few decades (timber trees).
5. List of each crop and tree species (including the cultivation practices to grow it), the positive and negative impacts on the soil, water, erosion, pollution, etc. Ask farmers about their experiences in growing the crops/trees over long periods at the same site to facilitate the discussion on ecological impacts.
6. Discuss and analyze the social equity to access land (quality and quantity). Identify difficulties and propose solutions that should be taken into account during the land use planning.
7. Assess which crops/trees and current land use practices are most suitable in terms of economic profit, social equity and ecological impact. Prioritize the land use practices.
8. List potential crops, agro-forestry systems and tree species that are not yet grown in the area but might have potential. Repeat step 4, 5, 6 and 7 and make a socio-economic, environmental analysis. Prioritize the potential land use practices.
9. Write the results of the economic, ecological and social analysis of both the current and potential land use practices on A0 paper and hang the results on the wall.
10. For the identification of land use trends: Agree upon the main land use practices: for example: residential area, agricultural crop land, paddy rice land, barren land, forest plantation & natural forest land. Write down of each land use practice the current area (ha). The total sum should be that of the entire village area. Do the same for 5 years ago and 10 years ago. Make estimates if there are no official data available. Now it will be clear which land use practices increased and decreased over the last 5 to 10 years.
11. End the exercise and explain that now all the preparation exercises before the actual land use planning have been completed.

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<sup>2</sup> In Vietnam the Government has standard criteria to convert production of other staple crops (cassava, maize, etc) into rice; 370 kg of rice equivalents is considered as sufficient per person per year

**Note:**

In case villagers are not familiar with potential land use options under agro-forestry, afforestation and/or natural resource management, the professional staff has to introduce a range of suitable land use options which can further be assessed.

**Cost-benefit analysis**

Land use practice:..... Time until harvest:.....  
Village:..... Commune:.....

No.	Content	Unit	First year			Second year			Third year		
			Quantity	Unit price	Sub-total	Quantity	Unit price	Sub-total	Quantity	Unit price	Sub-total
<b>A</b>	<b>Costs</b>										
I	Labour										
II	Seeds/ seedlings										
III	.....										
IV	.....										
<b>A1</b>	<b>Total expenditure</b>										
<b>B</b>	<b>Revenues</b>										
I	Main crop										
II	By products										
III	.....										
<b>B1</b>	<b>Total revenue</b>										
<b>C</b>	<b>Profit</b>		<b>B1 – A1</b>								

## Ecological impact analysis sheet

Land use practice:.....

Village: ..... Commune:.....

<i>Item</i>	<i>Ecological impacts</i>			
	<i>Positive impacts</i>	<i>Neutral impact</i>	<i>Negative impacts</i>	<i>Unknown</i>
Impact on soil				
Impact on water				
Impact on erosion				
Use of pesticides				
Use of fertilizers				
Impact to neighbouring sites				
.....				

## 2.2 Step 3: Development of commune land use plan

### *Development of draft village land use plan*

The preceding exercises, including the preparation of a 3-D model, the transect and listing of areas under current land use practices were all necessary to prepare and develop a suitable land use plan. In this exercise, the selected villagers with support from the commune working group will prepare an initial land use plan that will be discussed with the entire village during a village meeting.

### **Objective**

- To develop a land use plan based on the earlier developed 3D model and transect diagram

**Time needed:** 3 hours

**Materials** A0 paper, markers, 3-D model, transect diagram, outcomes of the socio-economic analysis of the village, list with current land use practices and their respective areas, base map, copies of the forms as included in Circular 30/2004/TT-BTNMT

### **Steps**

1. Present the objectives of the exercise, the time required and explain that the participants are expected to prepare the initial land use plan.
2. Identify the land use objectives of the village based on existing district and communal socio-economic land use plans and based on actual needs of the villagers (including the poor and disadvantaged groups).
3. Examine the current land use map and 3-D model and discuss all the different land use practices starting from the residential areas to the boundaries of the village.

The following questions can help the discussion for the development of the land use plan:

- Is the current land area for a given land use practice sufficient? If not, can the area be expanded and where?
  - Can the economic benefits from the land use be increased?
  - What are the negative ecological impacts of the current land use? Can these negative ecological impacts be overcome or reduced?
  - Is the current land use socially acceptable? Do poor and disadvantaged groups have sufficient access to land? How is the land distributed in terms of quality, quantity and accessibility?
  - How can the problems identified in the transect diagram be overcome?
  - How can the opportunities and solutions identified in the transect diagram be realized?
  - How will the land areas classified as “unused land” be put into use?
  - Is there any land area that needs to be given back to the commune authorities?
  - Which forestland area should be allocated to individual households, groups of households and/or village? (Explain again the advantages of allocating forest land to individual households that is located relative near residential areas; the allocation of forest land that is relative far to groups of households and the allocation of forest land that holds common interest (such as water resources) to the whole village; explain also the need for using ecological boundaries.)
  - What are the phases for land use implementation, changing certain land use types, taking back land and bringing unused land into use?
4. Based on the outcomes of the discussions and the priorities and objectives set by the village, identify and list all the suitable land use options per site.
  5. Select the most suitable land use option for each site based on economic, ecological and social considerations. Refer to the correct land use options as described in the land law (13/2003/QH11).
  6. Check if you have all the information needed to fill in forms 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15 as stipulated in Circular 30/2004/TT-BTNMT.
  7. Explain that the professional staff in cooperation with the cadastral staff and with support from the village leader will finalize the village land use plan map and the tables related to the land use plan report.

### ***Preparation of the village land use plan map and filling in tables related to the land use report***

The cadastral staff and professional staff will prepare the village land use plan. For the development of the land use report and filling in the land use plan tables as stipulated in Circular 30/2004/TT-BTNMT the support of the village leader is also needed.

1. Prepare the village land use plan on a overlay transparency (scale at least 1:5,000) and use color pens to mark the areas that are proposed for a specific land use option (use the same colors for the land use practices as were used on the base map as prepared earlier).
2. Fill in the tables as is required in Circular 30/2004/TT-BTNMT.

#### **Note:**

Allocation of forest land to a village or group of households is suitable if forestland is relative far away from residential areas, if the available forest land is relative small and/or if the forest land holds resources or other common interests for the whole group or village

(e.g. water sources that are used/managed by the entire group or village) and cannot be allocated to organizations or individual households.

### **Second village meeting**

The village land use plan affects all households in the village. Therefore the land use plan should be presented and discussed with the entire village. This meeting should be carefully prepared because it is likely that there will be a large number of participants.

#### **Objective**

- To agree upon a final village land use plan and forest land allocation plan
- To explain the next PLUP-FLA steps

**Time needed:** 2 hours

**Materials** 3-D model, base map of current land use situation, village land use plan map, transect diagram

#### **Steps**

1. Welcome all the villagers and explain the objectives of the village meeting.
2. Explain how the land use plan was developed and describe the different exercises that were used to analyze the existing situation. Present the results of the analysis of the existing situation, including the base map and the transect diagram.
3. Present the land use plan and discuss each proposed land use practice, starting from the residential areas towards the village boundaries. Ask the villagers if they agree with the proposed land use options for each site. Encourage discussions and ask individual villagers (including men and women, young and old, poor and better-off) about their ideas about the initial land use plan
4. Explain the different options for forest land allocation (allocation to individual households, groups of households and entire village)
5. Show on the map and/or 3D model, the areas that have been identified for allocation to individual households, groups of households and/or to the entire village. Encourage discussions and ask individual villagers (including men and women, young and old, poor and better-off) about their ideas on this general forest land allocation plan.
6. Finish the discussions and summarize the results and list the modifications that will be made in the proposed land use plan.
7. Explain the next steps in PLUP-FLA. The FLA plan will be made after the approval of the land use plan and the application forms will be distributed in the next village meeting.
8. Thank the villagers for their participation and close the village meeting.

#### **Note:**

Ensure that prior to the meeting the maps of the current land use situation and land use plan, and the transect diagram are hung on a wall that is accessible to villagers and also ensure that villagers can see and study the 3-D model. Members of the commune working group and the key villagers should have an open receptive attitude towards comments and suggestions of villagers and not be defensive about the results and/or the initial land use plan. The village meeting gives villagers the opportunity to know and discuss the village land use plan and it should be clear that changes and modifications can be made.

Forest land allocation options (apart from allocation to economic sectors and organizations) are: land allocation to individual households, land allocation to group of

households and land allocation to the entire village. Land allocation to individual households is most appropriate for forestland that is located near residential areas, where forest management is relative easy. Allocation to forest user groups is more appropriate for land relative far from residential areas (for example more than one hour walking distance) since management and protection of these areas is more complicated and the maintenance of human induced boundaries practically impossible. Therefore in these areas plot boundaries should be based as much as possible on ecological boundaries and features in the landscape. Finally allocation to the village might be the best option if the forest land is too far and/or inaccessible, and/or if the forest holds resources or other common interests of importance to all villagers (e.g. water sources that are used by the whole village). Another reason to allocate some land to the entire village can be to “save” some areas for people who are not able to manage a plot of forest land but need forest resources for their livelihood (e.g. the poor and/or elderly with no labor resources) and/or for future generations and immigrants.

### 2.3 Step 4: Village FLA planning

#### *Preparations for the development of a village FLA plan*

The professional staff in cooperation with the commune working group and the selected key-villagers will prepare a draft general FLA plan of the village which outlines the estimated number of individual households and the estimated number of groups of households that can receive forest land.

#### **Objectives:**

1. Preparation of a general village FLA plan

**Time needed:** 2 hours

**Materials:** village base map, forest status map, topographic village map, 3D model approved land use plan

1. Present the land use plan and show the key-villagers the areas that have been approved for allocation to individual households and groups of households.
2. Discuss per forest area that has been approved for allocation to individual households, the estimated number of individual households that can receive forest land. Discuss also if every household should receive the same plot size or that some households should receive larger/smaller plots –depending on e.g. forest status and/or accessibility.
3. Discuss about the selection criteria for FLA. Criteria can for example be the location of the household, former forest activities in a certain area, dependency on forest land, number of main and sub-laborers, etc.)
4. Discuss per forest area that has been approved for allocation to groups of households, the estimated number of groups and the estimated number of households per group. Answer questions such as:
  - Where are the ecological boundaries/ecological features (streams/watercourses, hills, valleys, etc) that can be used to demarcate plot boundaries of forest land that will be allocated to groups of households and/or the village?
  - How many plots are there to be managed by groups of households making use of ecological boundaries?

- How many households should ideally be involved in the management of each of these plots? (The sizes of each forest plot will differ because use it made of ecological boundaries. Depending on its size, the plot will be managed by larger or smaller groups).
5. Discuss about the criteria for participating in a group of households that receive forest land.
  6. Write the outcomes of the discussions on an A0 and make a sketch map of the forest areas showing the local name of the forest land and the estimated number of individual households and/or groups to receive the land.
  7. Summarize the results and end the exercise.

**Note:**

Every forest management group does NOT need to be of the same size (a small group can manage a small forest area, whereas a bigger group could manage a larger size) if this is more suitable and better reflects the situation in the field. Participation in forest management groups should be on a voluntarily basis and based on the interests of local people. Groups can for example be based on kin or on neighboring households. Once a household decided to participate in a forest management group, the household is bound to the responsibilities set for the group.

***Third village meeting***

In the third village meeting, all villagers who are interested in receiving forest land should participate.

**Objectives:**

1. Presentation of the approved land use plan
2. Presentation of the benefits and rights of receiving forest land
3. Agreement on the estimated number of individual households who can receive forest land per location
4. Agreement on the estimated number of groups of households who can receive forest land per location
5. Agreement on the estimated number of households that can participate in a group per location
6. Agreement on the criteria for FLA
7. Distribution of application forms
8. Agreement on contribution from villagers during FLA field implementation

**Time needed:** 3 hours

**Materials:** Approved land use plan and map, sketch map and A0's as prepared in the former exercise, application forms

**Steps:**

1. Welcome all the villagers
2. Present the approved land use plan and show the areas that have been approved for allocation to individual households and groups of households.
3. Explain the benefits and rights of receiving forest land according to Decision 178/2001/QĐ-TTg (see note below).
4. Show again the areas that have been approved for allocation and show the numbers of estimated individual households that can receive forest land per location as

- discussed with the key-villagers. Agree upon the estimated numbers. Explain that the proposed number is only an indicator and not fixed.
9. Explain that the areas to be allocated to groups of households will be managed by these groups. Explain the proposed functions and tasks of the forest management groups in general. Explain that after the groups are formed, the groups should sit together and decide among themselves who to appoint as the head and vice head of the group. The group should also discuss the organizational and operational arrangements of the group.
  5. Discuss the number of groups and discuss the number of households proposed to participate in these forest management groups. Agree upon the estimated numbers. Explain again that the proposed number is only an indicator and not fixed.
  6. Present the criteria for FLA as discussed with the key-villagers and agree upon the criteria.
  7. Verify if everything is clear for the villagers, and clarify issues if needed.
  8. Hand out the application forms for FLA and explain the forms.
  9. Explain the next steps of FLA implementation and agree upon the contributions from the villagers during FLA implementation in the field
  10. Explain that the commune working group in cooperation with the professional staff will select the eligible households. Explain that the list of eligible and non-eligible households with the respective land areas will be hung in the CPC building and be available at the village leader for 15 days. In these 15 days villagers have the opportunity to see the results and ask for modifications.
  11. Thank the villagers for their participation and end the meeting

**Note:**

According to Decision 178/2001/QĐ-TTg people are allowed to collect NTFPs (fuelwood, rattan, bamboo, medicinal plants, vegetables, mushrooms, etc) from their allocated forest land but need written permission from the DPC for natural timber harvesting for house construction and written permission from the prime minister for harvesting natural timber for marketing. In case of setting up tree plantations on allocated forest land, landowners are expected to pay tax when harvesting the wood. In return forest land owners are expected to manage and protect the allocated forest land effectively.

## Appendix 1: Samples of several documents to be prepared during the FLA process

The list and samples included in this appendix are based on the guideline for FLA issued by the Forest Protection Department, MARD (1996). Although these forms are relative old they are still very useful to record data on the forest status. Other forms that also need to be filled in during the FLA process are the list of registered households, list of eligible and non-households, etc. These forms are not included here but can be found in Circular 29/2004/TT-BTNMT.

No	Documents to be prepared per step	No	Samples
<b>Step 1</b>			
1.	Decision for the formation of a commune working group	3	Sample 1
2.	Decision for the formation of a district steering group	3	Sample 1
<b>Step 2</b>			
3.	Data about the current status of forest land	3	Sample 2
4.	Classification of forest land	3	Sample 3
5.	Data about the forest volumes per plot	3	Sample 4
6.	Minutes of first village meeting	3	Sample 5
7.	Current village land use map and current land use report	1	Circular 30/2004/TT-BTNMT
<b>Step 3</b>			
8.	Minutes of second village meeting	3	Sample 5
9.	Minutes of commune and district meeting	3	Sample 5
10.	Commune land use plan and report	3	Circular 30/2004/TT-BTNMT
<b>Step 4</b>			
11.	Minutes of the third village meeting	3	Sample 5
12.	Application forms for requesting forest land		Circular 29/2004/TT-BTNMT
13.	Registration list for households to receive forest land	3	
14.	Lists of eligible and non-eligible households	3	
15.	Data about allocated forest land area per forest plot	3	Sample 6
<b>Step 5</b>			
16.	Commune FLA proposal	3	
17.	Application forms requesting for red book certificates		Circular 29/2004/TT-BTNMT
18.	Minutes of handover of forest land		Sample 7
<b>Step 6</b>			
19.	Minutes of appraisal on the applications for FLA by the CPC and community working group	3	Sample 8
20.	Sets of cadastral documents	3	Circular 29/2004/TT-BTNMT
<b>Step 7</b>			
	Appraisal minutes of cadastral documents	3	Circular 29/2004/TT-BTNMT
	Proposal for issuance red book certificates	3	
21.	Decision of the DPC to issue red book certificates	3	

**Sample 1: Decision for the formation of the PLUP-FLA commune working group**

**People's Committee**

.....  
No.:...../QD-UB

**Socialist Republic of Vietnam**  
**Independence - Freedom - Happiness**

-----o0o-----  
Date : .....

**DECISION OF THE PEOPLE'S COMMITTEE OF .....**

**On "Formation of Commune Working Group"**

**PEOPLE'S COMMITTEE OF .....**

Based on the Organizational Law of DPC, DPCo., dated 26/6/1994  
Based on the Land Law No. 25/2003-QH11  
Based on Decree No. 181/2004/ND-CP of the Government

**DECIDES**

**Article 1:** To establish the commune (ward/town) Commune Working Group (CWG), including:

1. Mr/Mrs. Chairman/Vice-chairman of CPC.....
2. Mr/Mrs..... Commune cadastral worker, Secretary
3. Mr/Mrs..... FPU worker, member
4. Mr/Mrs..... Member
5. Mr/Mrs..... Member
6. Mr/Mrs..... Member
7. Mr/Mrs..... Member
8. Mr/Mrs..... Member
9. Mr/Mrs..... Member
10. Mr/Mrs..... Member

**Article 2:** The CWG undertakes the following tasks:

- Classification, appraisal, verification, discussion and recommendation of every application for FLA for the CPC that will submit to the authorized level for approval.
- Openly inform the applications for FLA for feedbacks of local people, verify and come with solutions for the applications under complaints.
- 
- 

**Article 3:** The administrators of DPCs, Chairman of CPCs (ward, town) and the people mentioned above are responsible for implementing this decision./.

**Cc:**

- Members of CWG
- CPC (ward, town)
- District DoNRE
- FPU
- Archiving

**On behalf of PC.....**  
**Chairman**



Surveyed by :

**Sample 3 : Classification of available forest land**

**Classification of available forest land**

Village.....Commune.....District.....  
(Unit : Ha) Sheet No.: :.....

Item	Total area (ha)	Classification according to purpose of use		
		Production forest	Protection forest	Special use forest
Total				
1. Land with forests				
a. Natural timber forests				
- Rich				
- Average				
- Poor				
- Recovered				
b. Mixed forests				
c. Planted forest				
d. Bamboo forest				
2. Barren land				
- Grass (IA)				
- Shrubs (IB)				
- With regenerated trees (IC)				
- Lime stone mountains with regenerated trees or scattered grass/shrubs				

Date:  
Surveyed by :





**Sample 5: Minutes of village meeting**

**Socialist Republic of Vietnam**  
**Independence - Freedom - Happiness**

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**MINUTES OF VILLAGE MEETING**

Today, date ....., at: .....h .....minutes  
Place: Village .....commune.....District.....  
Implementing the policies and guidelines of Quang Binh PPC and the plans of DPC, CPC regarding the FLA to individual households, individuals, groups of households, village communities and organizations for the purpose of long-term protection and management, today, at village: .....  
Gathering in this meeting are households and the FLA commune working group to conduct the village meeting: .....(time) to discuss and agree upon .....

**I. Participants:**

**1. Representatives of the commune:**

Mr/Mrs. .... Position:.....  
Mr/Mrs. .... Position:.....

**2. FLA commune working group:**

Mr/Mrs. .... Position:.....  
Mr/Mrs. .... Position:.....  
Mr/Mrs. .... Position:.....  
Mr/Mrs. .... Position:.....

**3. Village:**

Mr/Mrs. .... Position:.....  
Mr/Mrs. .... Position:.....  
Mr/Mrs. .... Position:.....  
Mr/Mrs. .... Position:.....  
and representatives of .....(no.) of households/total of households in the village.

**II. Meeting content:**

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

**III. Results/outputs:**

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

The meeting is closed at: ..... on the same date and minute of the meeting is read aloud./.

**Representative of VMB**  
(Signature, Full name)

**Minutes written by/meeting secretary**  
(Signature, Full name)



## Sample 7 : Minutes of handover of forest land

Socialist Republic of Vietnam  
*Independence - Freedom - Happiness*

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### MINUTES OF HANDOVER OF FOREST LAND

Implementing the governmental policies for allocation of forest land and natural forests to individual households, groups of households, communities and other organizations;

Today, date: .....

At village ..... Commune/ward..... District.....

We have measured and allocated forest land to the forest user as follows:

#### 1. Representatives of forest land allocator:

Mr/Mrs.:..... Chairman of CPC.....  
Mr/Mrs.:..... Commune cadastral worker.....  
Mr/Mrs.:..... Village head.....  
Mr/Mrs.:..... Member of CWG.....

#### 2. Representative of forest land receiver: (Forest user)

Mr/Mrs: .....

(name of the husband and wife or representatives of the group in case land has been allocated to a group of households)

Address: Village, group.....Commune/ward.....District.....

The two sides have measured, demarcated the land patch, area, forest status and forest volume; have made an assessment of the status, growth and development situation of the planted forest area and regenerated forest under delineated which have been invested. Mutual discussion and agreement have been reached upon to allocate (in the field) the plot for: .....as forest user, specifically:

No. of plot allocated ..... Total area..... ha.  
(No of plot allocated for use by a group of households.....) Total area.....ha.

The minutes of village meeting is read out aloud for final agreement and signatures.

**Forest user**

**Representative of VMB**

**Representative of FLAWG**

*(Signature, Full name)*

*(Signature, Full name)*

*(Signature, Full name)*

**On behalf of CPC  
Chairman**

*(Signature, stamp)*

## STATUS, AREA OF FOREST LAND/FOREST PATCH TO BE ALLOCATED

(Including Minute of Village meeting for FLA)

### 1. Status, Area of planted forest:

- Assessment of the growth and development of planted forest.....
- Investment fund: Tree seedlings (quantity)..... Plantation and tending costs.....

Sheet (Code of map), No. of plot	Forest unit, Compart ment, plot	Place	Area (ha)	Species	Stand of survival trees/ha	Age level	Total Volume		Purpose of use	Silviculture option applied	Remark
							M <sup>3</sup> /Plot	N/Plot			
							8a	8b	9	10	11
1	2	3	4	5	6	7					
<b>Total</b>											

### 2. Status, Area of forest land, natural forest:

Sheet (code of map), No. of plot	Forest unit, compartm ent, Plot	Place	Area	Status	Natural forest		Barren forest land		Purpose of use	Silviculture option applied	Remark
					M <sup>3</sup> /Plot	N/Plot	Stand of regenerated trees/ha	Species			
1	2	3	4	5	6a	6b	7a	7b	8	9	10

Note: This table is applicable for forest users as communities and organizations in the village or commune.

*Date:*

**Prepared by:**

**SKETCH OF THE LOCATION OF FOREST LAND PLOT RECEIVED (copy from Forest Land Allocation Map)**

*(attached to the handover minutes and red book certificate )*

Sheet No.: :.....

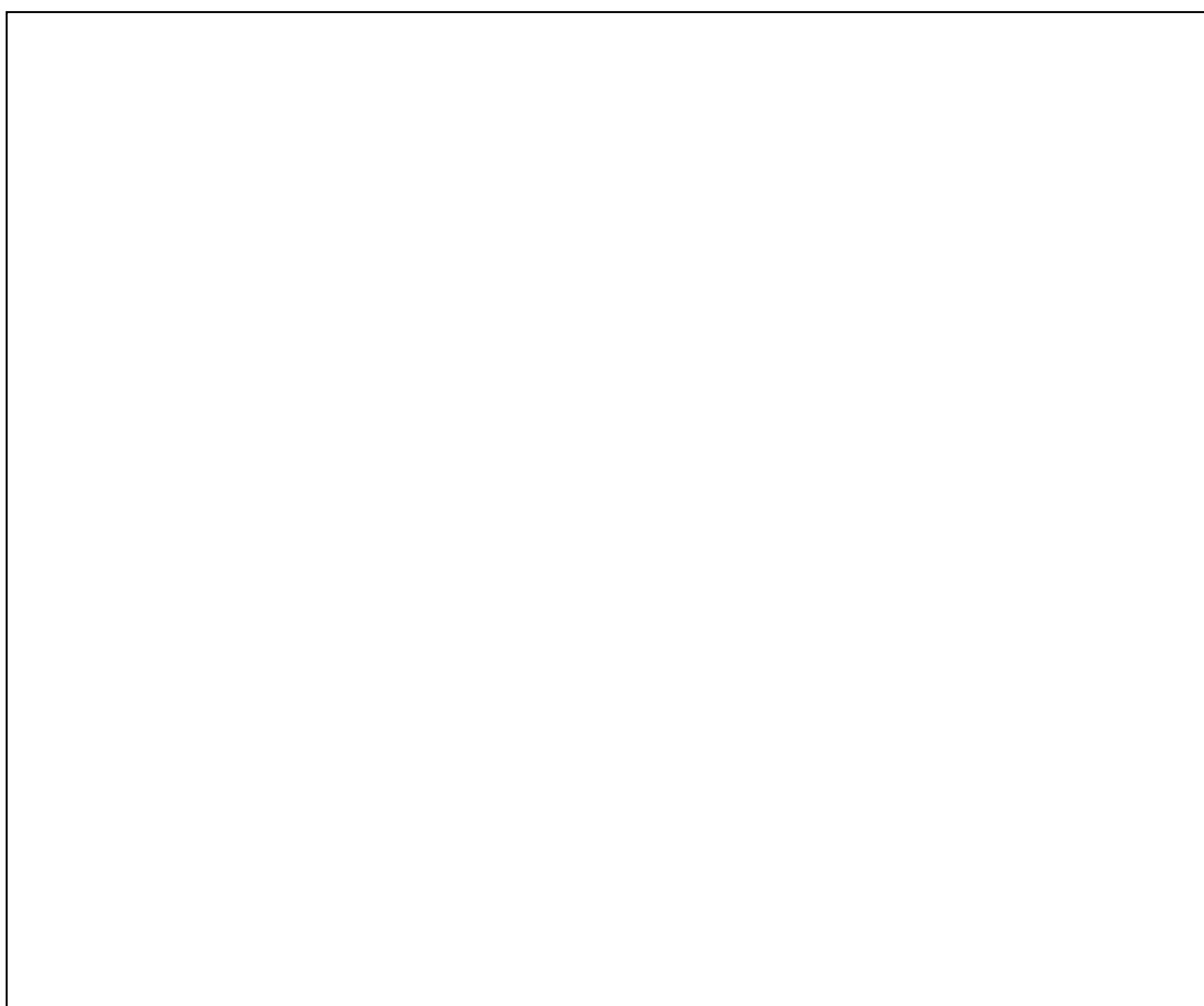
Full name of forest user/head of forest user group:.....

Village.....Commune(ward).....District .....

Area of plot .....ha; belonging to forest unit.....compartment.....Plot.....

According to the cadastral map of the village no. .... Plot no. ....

Place .....



A large, empty rectangular box with a black border, intended for a hand-drawn sketch of the forest land plot location.

Date: .....

**Technical staff**

## Appendix 2: Relevant articles in forest related policies

### Decision 178/2001/QĐ-TTg

#### On the benefits and obligations of households and individuals assigned, leased or contracted forest and forestry land

**Article 5:** Households and individuals assigned protection forests for management, protection and regeneration zoning off:

1. To be provided with funding by the State for performance of the task of managing, protecting and zoning off forests for regeneration according to current regulations.
2. To harvest secondary forest products, flowers, fruits, oil, resin... in the course of protecting and zoning off forests for regeneration according to current regulations.
3. To exploit dry necron-timber trees, fallen and broken trees as well as diseased trees according to the exploitation designs approved by the provincial/municipal Agriculture and Rural Development Services and the permits granted by the latter. The above-mentioned forest products may be freely circulated upon the completion of all the procedures
4. To exploit bamboo with the maximum exploitation intensity of 30% when the forest coverage reaches 80% of the assigned land area according to the current regulation on exploitation of forest products; to enjoy the entire value of forest products after paying taxes.
5. To exploit timber by the mode of selective cutting with the exploitation intensity of not more than 20% when the protection forests are allowed for exploitation (except for animals and plants on the lists of precious and rare forest plants and animals promulgated by the Government, and lists of animals and plants provided for in the appendix to the Convention on International Trade in Endangered Species of Wild Fauna and Flora-CITES) according to designs approved by the provincial/municipal Agriculture and Rural Development Services and exploitation permits granted by the latter. The exploitation must comply with the current regulation on exploitation of forest products. Households and individuals shall enjoy 85-90% of the exploited products after paying taxes, the rest shall be remitted into the State budget.

**Article 6:** Households and individuals assigned forestry land without forests but falling under the protection forest planning:

1. To be provided with funding by the State for forest planting and tending according to current regulations.
2. To use perennial agricultural plants as major trees for planting in the protection forests or inter-planting with perennial native forest trees according to afforestation designs approved by the provincial/municipal Agriculture and Rural Development Services.
3. To enjoy 100% of products exploited from supporting trees, inter-planted trees and forest thinning's products according to designs approved by the provincial/municipal Agriculture and Rural Development Services, and to ensure the forestry coverage degree of over 0.6 after thinnings.
4. To use no more than 20% of the forestry land area without forests for agricultural production and aquaculture.
5. To exploit timber by the mode of selective cutting with the exploitation intensity of not more than 20% when the protection forests are allowed for exploitation according to designs approved by the provincial/municipal Agriculture and Rural Development Services and exploitation permits granted by the latter. The after -tax value of exploited products shall be divided according to the following proportions: households and individuals shall enjoy 90-95%, the remainder shall be remitted to the State budget.
6. In cases where households and individuals invest capital by themselves in forest planting; they shall enjoy 100% of products when forests reach exploitation ages but can annually

exploit no more than 10% of the area already afforested by forest owners according to current technical processes and regulations.

**Article 7:** Households and individuals assigned by the State natural forests subject to production forest planning:

1. To inter-plant agricultural, and pharmaceutical plants, graze cattle and exploit their forest resources according to the regulation on management of production forest.
2. To make the fullest use of products in the course of applying silvicultural measures according to current processes and regulations
3. To exploit forest products to meet the family needs (except for the animals and plants on the lists of precious and rare forest animals and plants by the Government and lists of animals and plants provided for in the appendix to the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES). If wishing to build new houses for households separation or replacement or overhaul of their dwelling houses in communes where exist forests, the concerned households or individuals shall have to file applications with the commune People's Committees for certifications and further submission to the district People's Committees for consideration, approval and granting of permits for exploitation of not more than 10cm<sup>3</sup> of log for each household. The must be subject to the commune administrations guidance and supervision. All acts of taking advantage of exploitation of housing timber for trading are strictly prohibited.
4. When forests are exploitable, households and/or individuals shall file applications for exploitation with the commune People's Committees for consideration and submission to the provincial/municipal Agriculture and Rural Development Services for approval and granting of exploitation permits. The exploitation must comply with current regulations on forest product exploitation. Depending on the present conditions of forests when they are assigned to households or individuals, the after tax value of major forest products shall be divided according to the following proportions:

a/ For timber forests:

- Depleted secondary forests: Households and individuals shall enjoy 100%.
- Forests restored after milpa farming or exploitation of timber trees with the common diameter of under 20 cm: Households and individuals shall enjoy 70-80%, the rest shall be remitted into the State budget.
- Forests with average or rich reserves of more than 100 m<sup>3</sup>/ha: From the time of assignment to the time of exploitation thereof, each year households and individuals shall enjoy 2%, the rest shall be remitted into the State budget.
- Forests with average or rich reserves of more than 100 m<sup>3</sup>/ha: From the time of assignment to the time of exploitation thereof, each year households and individuals shall enjoy 2%, the rest shall be remitted into the State budget.

b/ For bamboo forests: They are allowed for exploitation according to current technical processes and' regulations. After paying taxes, households and individuals, shall enjoy 95% of the forest products' value, the remaining 5% shall be remitted into the State budget.

**Article 9** - Households and individuals assigned forestry land without forests but falling under the production forest planning, for afforestation:

1. To be supported by the State with capital for afforestation according to current regulations.
2. If receiving support capital from projects for afforestation, to enjoy the benefits provided for in the regulations of 'such projects.
3. If investing their own capital in afforestation, to have the right to decide by themselves on afforestation purposes and modes (zoning off for regeneration or planting new forests),

select trees for planting and planting techniques; and have the right to decide on their own exploitation and use of forest products.

4. All products exploited from forests shall be freely circulated.
5. To use part of forestry land without forests for agricultural production or aquaculture, which, however, must not exceed 20% of the assigned land area.

**Article 10:** Households and individuals leased forestry land without forests but falling under the production forest planning, for afforestation:

1. To have the right to decide by themselves on afforestation purposes and modes (zoning off for regeneration' or planting new forests), select trees for planting and planting techniques; and have the right to decide by themselves on the exploitation and use of forest products.
2. If households and individuals receive support capital from projects for afforestation, they shall enjoy the benefits provided for in the regulations of such projects.
3. All products exploited from forests shall be freely circulated.
4. To use part of forestry land without forests for agricultural production or aquaculture, which, however, must not exceed 20% of the leased land area without forests.

**Article 23:** The proportion of forest products' value to be remitted into the State budget according to the provision of this Decision shall be left for communes and used mainly for management, protection and development of forests. The proportion of forest products' value to be paid to the contracting party shall be used as follows:

1. For special-use forest management boards, protection forest- management boards and other State organizations: It shall constitute a revenue source and be used mainly for forest management, protection and development.
2. For State enterprises: It shall-constitute a revenue source from forestry business activities in direct service of forest management, protection and development:

#### **Decision 08/2001/QĐ-TTg**

#### **On management of special use forest, protection forest and production forest**

**Article 19:** Classification of protection forest based on crucial levels

1. Very crucial protection areas are located on sloppy upstream or near by the rivers, lakes or on the areas that are endangered of strong erosion, or have high demand on water regulation, having strong sand movements, threat from sea waves on production and life in urgent need of protection and therefore it need to be established as protection forest in order to ensure the forest coverage of over 70%.
2. Crucial protection areas are located on the medium sloppy, erosion and water regulation area, having lower threat by sand movements and sea waves; and where that have sufficient conditions to combine forestry production development and at the same time have requirement on land utilization and protection and therefore it need to be established as protection forest in combination with production so as to ensure the minimum forest coverage of 50%;

MARD should issue specific regulation on criteria of crucial and less crucial protection areas.

**Article 20:** Organization of protection forest management

1. It is depending on scale and level of importance of each protection forest zone to set up Management board, in the special case if each protection forest of more than 5000 ha is allowed to set up Management board, operating as economic public utility unit with receipts. The protection forest management board is the forest owner, is allocated with forest land and granted with land use tenure certificates, responsible for management, protection and development of the allocated forests;

2. Protection forest of 30.000 ha and over has a forest protection station belonging to the protection forest management board and technically directed by the provincial forest protection agency.
3. Protection forests of less than 5000 ha (concentrate or fragmented) does not have the management board but to be allocated to other organizations, households and individuals for management, protection and development. Budget for this task comes from Provincial Budget. In case the forest owner is not yet identified, People's Committees of communes will be responsible for forest management, protection and development, and should have plan submitted to competent state agency for step-by-step allocation of forest and land to the said forest owners.
4. Staff number of the protection forest management board is based on the allocated area – 1 tenured staff per 1000ha and each management board should have a minimum of 7 full-time staff.

**Decree 163/1999/ND – CP**

**Concerning allocating and leasing of forest land to organizations, households and individuals for long-term forestry purposes.**

**Article 13.** Quotas of assigned and leased forestry land

1. Quotas of forestry land assigned to households shall be decided by the provincial People's Committees but must not exceed 30 hectares.
2. Quotas of forestry land assigned to organizations according to projects shall be approved by the competent State agency (ies)
3. Quotas of forestry land leased to organizations according to projects shall be approved by the competent State agency(ies), Quotas of forestry land leased to households and individuals shall depend on their land-leasing applications .
4. For uncultivated land, bare hills, coastal sand land and sea-encroaching land, the quotas of land assigned to households for forestial use shall be decided by the provincial People's Committees, depending on the local land fund and their production capacity, ensuring the implementation of the policy to encourage and create favorable conditions for the exploitation and use of these types of land for forestial purposes.

**13/2003/QH11**

**Land Law**

**Article 9:** Land users

The land users stipulated in the law include:

3. Communities of inhabitants including Vietnamese community living in the same village and similar communities of inhabitants who have the same customs and habits or the same bloodline; they are allocated with land or issued with land use certificate by the government;

**29/2004/QH11**

**Law on forest protection and development**

**Article 3:** Term interpretation

In this law, the following terms are construed as follows:

.....

13. Village population community means all households and individuals living in the same village, hamlet or equivalent unit.

**Article 29:** Assignment of forests to village population communities

1. The conditions for assignment of forests to village population communities are prescribed as follows:
  - a. The village population communities have the same customs, practices and traditions of close community association with forests in their production, life, culture and belief; are capable of managing forests; have demand and file applications for forest assignment;
  - b. The assignment of forests to village population communities must be in line with the approved forest protection and development plannings and plans; and match the capacity of local forests funds.
2. Village population communities shall be assigned the following forests:
  - a. Forests which they are managing or using efficiently;
  - b. Forests which hold water sources in direct service of the communities or other common communal interests and cannot be assigned to organizations, households or individuals.
  - c. Forests which lie in the areas adjoining villages, communes or districts and cannot be assigned to organizations, households or individuals and must be assigned to village population communities for the sake of communal interests
3. The competence to assign forests to and recover forests from village population communities is prescribed as follows:
  - a. The People's Committee of rural or urban districts, provincial towns or cities shall, basing themselves on the approved forest protection and development plannings and plans as well as the provisions of Clauses 1 and 2 of this Article, decide on forest assignment to village population communities;
  - b. The People's Committee of rural or urban districts, provincial towns or cities shall have the competence to recover forests from village population communities according to the provisions of Points a, b, d, e, f, h and i, Clause 1, Article 26 of this Law or when such communities move to other places.

**Article 30:** Rights and obligations of village population communities with assigned forests

1. Village population communities with assigned forests shall have the following rights:
  - a. To have the forest use rights recognized by competent State bodies for stable and long term corresponding to the forest assignment term;
  - b. To exploit and use forest products and other forest yields for public purposes and domestic use for community members; to conduct combined forestry-agricultural-fishery production according to this Law's provisions and forest management regulation;
  - c. To enjoy their labor fruits and investment results from the assigned forest areas;
  - d. To be provided with technical guidance and capital supports according to the State's policies for forest protection and development and benefit from forest protection and improvement works;
  - e. To be compensated for their labor fruits and investment results for forest protection and development according to the provisions of this Law and other relevant law provisions when the State issues forest recovery decisions.
2. Village population communities with assigned forests shall have the following obligations:
  - a. To formulate forest protection and development rules compatible with this Law's provisions and other relevant law provisions, submit them to the People's Committees of rural or urban districts, provincial towns or cities for approval and organize the implementation thereof;

- b. To organize forest protection and development, periodically report to competent State agencies on changes of forest resources and activities related to forests under the guidance of commune/ward/township People's Committees;
- c. To fulfill financial obligations and other obligations under law provisions;
- d. To return forests when the State issues forest recovery decisions or upon end of the forest assignment term;
- e. Not to divide forests among their members; not to convert, transfer, donate, lease, mortgage, provide guarantee or contribute business capital with, the value of the use rights over the assigned forests.

### Appendix 3: Facilitation skills

(Copied from the Training Package on Participatory Agricultural Extension Methodology-GTZ-SNV)

#### ***What is facilitation?***

Facilitation is a way of guiding discussions; field experiments or training that improves the learning effect within the group. It is based on the principle that adults learn best from own experiences and from discussing about their experiences. Technical knowledge is offered by the facilitator according to the demand of the farmers and discussed in a participatory way.

Mostly, the group is to draw conclusions or to agree about next steps. Especially in this step, the facilitator should leave the full stake to the group and not impose own ideas.

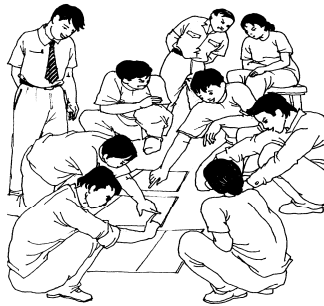


#### ***The key competencies of a good facilitator***

- 1. Group moderation** This is the most frequent task of a facilitator to guide a group to exchange ideas and experiences in order to come up with joint results, conclusions, or work plans.  
Good facilitation requires to pay attention to group dynamics, and to integrate the weaker group members, mostly women or poor people.
- 2. Communication** Group moderation builds upon personal communication skills. Among them, asking proper questions and listen actively are the most important ones.
- 3. Technical knowledge** Additional to farmers' experiences and knowledge, the facilitator should contribute specific technical knowledge – however, not imposing but offering and proposing solutions; not in a top-down but in a participatory way, respecting farmers' interests and demands.
- 4. Personal attitude** An authentic and positive attitude towards the farmers is the most important base for good facilitation. A person who thinks that farmers are lacking education and do not understand can never be a good facilitator.

**How to do facilitation**

**1. Group moderation**



**Moderate the group discussion**

- Clarify with the group what is the task or objective.
- Pick up the contributions from the group and help structuring different ideas.
- Invite also weaker group members, especially women, to give their ideas, and encourage the group to consider them seriously
- Mediate conflicting positions.
- Use different methods for visualization, e.g. small cards, pictures, A0 paper, black board, 3-D models etc.
- Help the group to define conclusions and/or action plans.

**2. Communication**



**Ask questions and listen actively**

- Ask questions for getting information, clarifying situations and opinions, encouraging people's participation, managing group processes, or help people to raise awareness, or enhance learning processes.
- Ask preferably open questions: How? Why? When? Who? What?
- Use questions to foster analytical thinking: Strong points? Weak points? So, what is the conclusion?
- Listen actively.
- Give feedback, and invite participants to give feedback

**3. Technical knowledge**



**Contribute technical knowledge**

- Figure out what technical knowledge is demanded by the farmers.
- Make examples or practical demonstrations.
- Ask for the local knowledge and how it might be integrated.
- Prepare easy understandable handouts.
- Do not impose your ideas, but offer your knowledge as a contribution to a learning process. Discuss with the farmers in which way they might apply the technical know how.

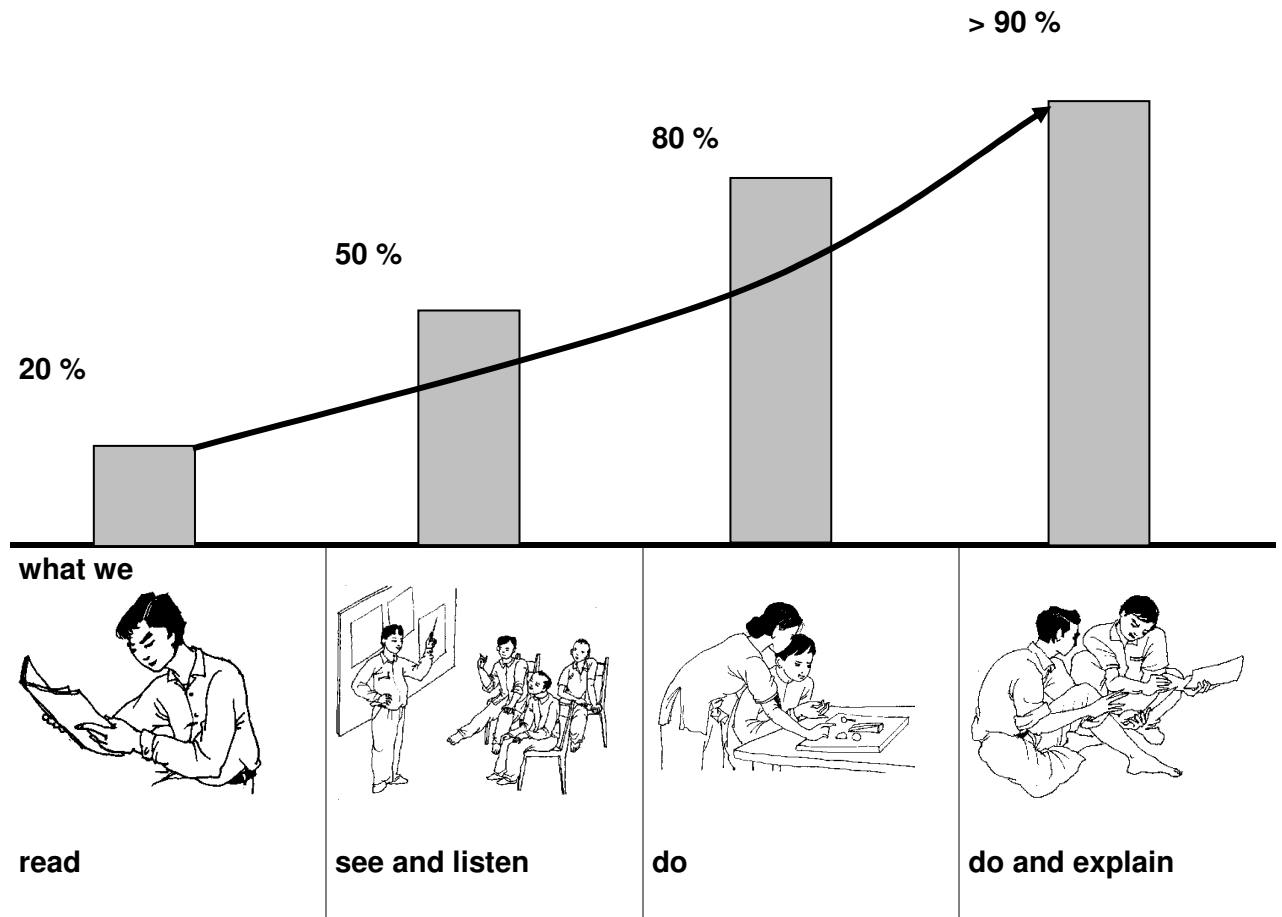
**4. Personal attitude**



**Convey empathy**

- Show your full respect to the people.
- Listen actively to the people's experiences and needs.
- Try attentively to understand their view points, feelings, and situation.
- Give positive and helpful feedback.
- Be respectful and interested in their local experiences
- Build up mutual understanding and trust, and encourage participants to respect mutual comments, especially of weaker group members and women. This is the most important base for good facilitation.

**We remember ...**



Therefore, the principles for effective training are to...

- facilitate the exchange of experiences among the participants (e.g. small working groups, group discussions)
- create opportunities to gain new experiences (practical exercises, field trips)
- reflect about experiences and what we can learn from it (reflection sessions and feedback)

#### Appendix 4: Different land use types according to the Land Law (2003)

No.	Land use	Code
<b>1</b>	<b>Total area of agricultural land</b>	<b>NNP</b>
<b>1.1</b>	<b>Land for agricultural activities</b>	<b>SXN</b>
1.1.1	Annual crop land	CHN
1.1.1.1	Paddy rice land	LUA
1.1.1.1.1	Paddy rice land for 2 crops/year (2 crops /year in case of fallow then fallow period is not more than 1 year)	LUC
1.1.1.1.2	Remaining rice land	LUK
1.1.1.1.3	Dry rice land	LUN
1.1.1.2	Grazing land	COC
1.1.1.2.1	Planted grassland for grazing	COT
1.1.1.2.2	Natural grassland with maintenance for grazing	CON
1.1.1.3	Other annual crop land	HNK
1.1.1.3.1	Flat annual crop land	BHK
1.1.1.3.2	Annual crop upland	NHK
1.1.2	Perennial crop land	CLN
1.1.2.1	Perennial industrial tree land	LNC
1.1.2.2	Perennial fruit tree land	LNQ
1.1.2.3	Other perennial tree land	LNK
<b>1.2</b>	<b>Forestry land</b>	<b>LNP</b>
1.2.1	Production forest land	RSX
1.2.1.1	Natural production forest land	RSN
1.2.1.2	Production forest land with plantations	RST
1.2.1.3	Production forest land for natural regeneration	RSK
1.2.1.4	Newly planted production forest land	RSM
1.2.2	Protection forest land	RPH
1.2.2.1	Natural protection forest land	RPN
1.2.2.2	Planted protection forest land	RPT
1.2.2.3	Protection forest land for natural regeneration	RPK
1.2.2.4	Newly planted protection forest land	RPM
1.2.3	Special use forest land	RDD
1.2.3.1	Natural special use forest land	RDN
1.2.3.2	Planted special use forest land	RDT
1.2.3.3	Special use forest land for natural regeneration	RDK
1.2.3.4	Newly planted special use forest	RDM
<b>1.3</b>	<b>Aquatic land</b>	<b>NTS</b>
1.3.1	Salty and semi salty surface land	TSL
1.3.2	Fresh water surface land	TSN
<b>1.4</b>	<b>Land for producing of salt - marsh</b>	<b>LMU</b>
<b>1.5</b>	<b>Other agricultural land</b>	<b>NKH</b>

No.	Land use	Code
<b>2</b>	<b>Off - farm land</b>	<b>PNN</b>
2.1	Land for house construction	OTC
2.1.1	Land for house construction in rural area	ONT
2.1.2	Land for house construction in urban area	ODT
<b>2.2</b>	<b>Regularly used land</b>	<b>CDG</b>
2.2.1	Land for government offices and public buildings	CTS
2.2.1.1	Land for state offices, working offices of other organizations	DTS
2.2.1.1.1	Land for state working offices	TSO
2.2.1.1.2	Land for other kind of offices	TS1
2.2.1.2	Land for public sites	DSN
2.2.1.2.1	Land for public sites without a business purpose	SNO
2.2.1.2.2	Land for public sites with a business purpose	SN1
2.2.2	Land for military purposes	CQA
2.2.2.1	Military land	QPH
2.2.2.2	Security land	ANI
2.2.3	Land for production activities and for off-farm business	CSK
2.2.3.1	Land for industrial area	SKK
2.2.3.2	Land for processing and business activities	SKC
2.2.3.3	Land for mineral exploitation	SKS
2.2.3.4	Land for producing construction materials and ceramic products	SKX
2.2.4	Land for public use	CCC
2.2.4.1	Land for roads	DGT
2.2.4.1.1	Land for roads without a business purpose	GT0
2.2.4.1.2	Land for roads with a business purpose	GT1
2.2.4.2	Land for irrigation systems	DTL
2.2.4.2.1	Land for irrigation systems without a business purpose	TL0
2.2.4.2.2	Land for irrigation systems with a business purpose	TL1
2.2.4.3	Land for electricity and communication cables installations	DNT
2.2.4.3.1	Land for electricity and communication cables installations without a business purpose	NT0
2.2.4.3.2	Land for electricity&communication cables installations with a business purpose	NT1
2.2.4.4	Land for cultural activities	DVH
2.2.4.4.1	Land for cultural activities without a business purpose	VH0
2.2.4.4.2	Land for cultural activities with a business purpose	VH1
2.2.4.5	Land for health service centre	DYT
2.2.4.5.1	Land for health service centre without a business purpose	YT0
2.2.4.5.2	Land for health service centre with a business purpose	YT1
2.2.4.6	Land for education	DGD
2.2.4.6.1	Land for schools without a business purpose	GD0
2.2.4.6.2	Land for schools with a business purpose	GD1
2.2.4.7	Land for sport activities	DTT
2.2.4.7.1	Land for sport activities without a business purpose	TT0
2.2.4.7.2	Land for sport activities with a business purpose	TT1
2.2.4.8	Land for market	DCH
2.2.4.8.1	Free allocation land for market construction	CH0
2.2.4.8.2	Other market construction land	CH1
2.2.4.9	Land areas with historical relics	LDT
2.2.4.10	Waste storing land	RAC
2.3	Land for churchyard/church/pagoda and cemetery	TTN
2.3.1	Land for church	TON
2.3.2	Land for pagoda	TIN
2.4	Land for churchyard, cemetery	NTD

No.	Land use	Code
2.5	Land of rivers, streams and other areas with water surface to be used regularly	SMN
2.5.1	Land of rivers, canals, streams	SON
2.5.2	Land area with water surface	MNC
2.6	Other land areas for off - farm purpose	PNK
2.6.1	Individual owned land without business activity	CTN
2.6.2	Land for building of temporary houses and camps	NTT
2.6.3	Land for agricultural services in urban area	DND
<b>3</b>	<b>Unused land</b>	
3.1	Unused flat land	BCS
3.2	Unused mountainous land	DCS
3.3	Barren rocky land	NCS
<b>4</b>	<b>Sea surface land</b>	
4.1	Sea surface land for aqua culture production	MVT
4.2	Sea surface with mangrove forest land	MVR
4.3	Sea surface land for other purposes	MVK

## Appendix 5: Classification of forest status

The classification of the forest status as described below is derived from Decision 682/QĐ and QP N6-84 of MARD dated 1 August, 1994.

### Classification of natural forests

Forests are classified into 4 groups:

- Group I: Group without forests
- Group II : Group of young/regenerated forests
- Group III: Group of secondary forests, affected forests
- Group IV: Group of primary forests

#### **Group I:**

Land without forests or with no forests at the moment, only covered with grasses, shrubs or scattered trees and bamboos with a cover of less than 0,30%. Depending on the status, this group is divided into:

- IA: is characterized by a vegetation of grasses and shrubs.
- IB: is characterized by a vegetations of shrubs, and some scattered timber trees or bamboos.
- IC: is characterized by a number of regenerated timber trees and the same species as under IA and IB. Forests classified as type IC only apply to land with regenerated timber trees of more than 1 m high and more than 1,000 trees/ha.

#### **Group II:**

Recovered forests with pioneer trees with a small diameter. Based on the status and origin, these forests are classified as:

- IIA: Forests that are recovered after slash-and-burn practices. It is characterized by pioneer trees with high light requirements, quick growth, even-aged and by one single storey.
- IIB: Forests that are recovered after being completely exploited; majority of these forests include young tree/plant communities of species that have a relatively high light requirements, complex species composition, uneven-aged and unclear dominancy of species.

Under the forest canopy of this forest status, there might be some timber trees but with limited volume. Classified into this type is only forest with an average DBH of less than 20 cm.

#### **Group III:**

Forest, that is secondary forests and/or affected forests. Forest that has been exploited by people at different levels, which affected the structure and composition of the primary forest. Depending on the level of exploitation and the regeneration capacity of the forests, forests of this group are classified into 2 types:

- IIIA: is characterized by forests that have been under tremendous exploitation and little timber remains for harvesting. The primary structure of the forests has been completely affected and is basically changed. Forests of this type are divided into three sub-types:
  - IIIA1: For forests which have been exploited until depletion, the forest canopy is fragmented, some high and large trees at the top-storey might remain but these are of poor quality and climbers, shrubs and bamboos are prevalent.
  - IIIA2: For forests which have been over-exploited but which is already recovered. It is characterized by trees belonging to the middle storey and the majority of them have a diameter of 20- 30 cm. Forests have 2 storeys or more, of which the upper storey

has an uncontinuous canopy, which is mainly formed by middle storey trees, while some scattered big and strong trees are growing over this canopy.

- **IIIA3** : Forests which have been exploited or developed from forests of type IIIA2. Forest canopy is relatively closed with 2 or multi story stands. It is characterized by (and differs in this aspect from the forest status of type IIIA2), a higher quantity of trees with some trees having a big diameter (above 35 cm) suitable for timber harvesting.
- IIIB: is characterized by forests under selective cutting for precious and good timber but the primary forest structure is not yet remarkably affected; the production capacity of this forests is still high; forests are rich in volume and many trees have lateral roots.

#### **Group IV**

Mature primary and secondary forests which have not been exploited. The forests have a stable structure, multi-storey, with different diameter classes but sometimes lack a middle storey and/or under storey. Forests of this group are classified into two types:

- Type IVA – Primary forests
- Type IVB – Recovered secondary forests

#### **Classification of bamboo forests**

Classification of bamboo forests is divided in *Nua* bamboo forest, *Vau* bamboo forest and *Tre/Luong* bamboo forest.

#### ***Nua* bamboo species**

- Forests consisting of only *nua* bamboo are classified as follows:
  - Status N.1 – (small *Nua* bamboo): Diameter < 2 cm; N/ha > 10.000 poles. *Nua* bamboo forests recovered after slash-and-burn practices or after being depleted or exhaustedly exploited.
  - Status N.II – (medium *Nua* bamboo): Diameter = 3 to 4 cm, are classified into 3 levels based on the density:
 

+ N.IIA	Low	10.000 – 15.000 poles /ha.
+ N.IIB	Average	15.000 – 20.000 poles /ha.
+ N.IIC	High	> 20.000 poles /ha.
  - Status N.III- (big *Nua* bamboo): Diameter > 5 cm; are classified into 3 levels based on the density:
 

+ N.IIIA	Low	5.000- 10.000 poles/ha.
+ N.IIIB	Average	10.000- 15.000 poles/ha.
+ N.IIIC	High	> 15.000 poles/ha.
- *Nua* bamboo forests mixed with timber trees:
  - Status of bamboo forest mixed with timber trees (*nua* bamboo dominates), is described by the bamboo status followed by a letter representing the main timber species. For example: N.IIIA + Re
  - Natural timber forest mixed with *nua* bamboo
    - Status of natural forest with *nua* bamboo (forest dominates) is described by the status of the natural forest followed by a letter representing the bamboo species. For example: IIIA3 + N

#### ***Vầu* bamboo species**

- Status VI: *Vầu* bamboo regenerated forests are classified into 3 types:
  - V.IA - Status of degraded *Vầu* bamboo forests is called “*Vầu* đĩnh”: D: 2 -4 cm and density (N/ha) is 5,000 to 10,000 poles.
  - V.IB - Status of *vầu* bamboo forests recovered after slash-and-burn practices: D = 4- 6 cm and density (N/ha) is 1,000 to 3,000 poles.

- V.IC - Status of *vau* bamboo forests recovered after serious exploitation: D = 6- 8cm and density is 1,000 to 5,000 poles per ha.
- Status V.II: Status of *vau* bamboo forests of D = 8 to 10 cm; density of 2,000 to 3,000 poles per ha; two sub-types:
  - V.II – Pure *vau* bamboo forests
  - V.II + G – *Vau* bamboo forests mixed with timber trees

When classifying forest areas, it is needed to identify the names of dominant timber trees and then replace the symbol G by the names of the species. For example: VII + Re (Re is the Vietnamese name for *Cinnamomum* sp.)

- Status V.III: Status of *vau* bamboo forests which have not yet been exploited, with a diameter of more than 10 cm. This status is often divided into 3 sub-types:
  - V.III: Pure *vau* bamboo forest, with a high density of more than 4,000 poles/ha
  - V.III + G: Status of *vau* bamboo mixed with timber trees, with a density of about 3,000 poles/ha
  - G.V.III: Status of timber trees mixed with *vau* bamboo, with the *vau* density of more than 4,000 poles/ha (G stands for timber, this symbol will be replaced by the abbreviation of the timber species).

### ***Tre, luong* bamboo species**

- For *tre/luong* bamboo species, the classification is divided in pure bamboo stands and mixed with timber trees. The forests consisting of only *tre/luong* bamboo are classified according to the *Tre/luong* bamboo species, diameter class and density.

Diameter classes:

Class I	3-5 cm.
Class II	6-9 cm.
Class III	>9 cm.

Density classes ( N/ha ):

Class 1 ( low )	1,000- 2,000 poles/ha.
Class 2 ( average )	2,000- 3,000 poles/ha.
Class 3 ( high )	> 3,000 poles/ha.

- Status of the *tre/luong* bamboo forest is described as the name of bamboo-diameter class- density of poles. For example: T-II-3: T stands for *Tre gai* bamboo, the diameter class is II and the density is more than 3,000 poles /ha. For forests consisting of a mix of bamboo species and timber species, the forest status classification is similar to that of *Nua* bamboo as described above.

### **Classification of plantations**

Plantations are described by the species; if a plantation consists of multiple species then the status of these multiple species is described, followed by the age class.

Classification of five age classes:

- Class I Young
- Class II Pole
- Class III Nearly mature
- Class IV Mature
- Class V Over mature (old)

The age classes differ per species depending on the growth rate, hard timber species

- Bo de: 2 years - 1 Age class
- Eucalyptus 3 years - 1 Age class
- Pine, Sa mội 5 years - 1 Age class

For example a pine (*thong*) plantation of 10 years old is described as “Th.II”

The age classes differ per species:

## Appendix 6: Plot size and survey area for forest inventories

The sample plot sizes and forest areas as mentioned in this appendix are derived from Decision 682/QĐ and QP N6-84 by MARD dated 1 August 1994.

### Survey areas

#### **Natural forests**

- Rich and medium forests: area that needs to be measured is 1.5% of the total area of the forest.
- Poor and recovered forests: area to be measured is 1 % of the total area of the forest
- Bamboo and other forests: area to be measured is 0.5 % of the total area of the forest

#### **Plantations**

- Age class I : area to be measured by 0.5 % of the area of the forest
- Age class II : area to be measured by 1 % of the area of the forest.
- Age class III : area to be measured by 2 % of the area of the forest

#### **Regeneration areas**

Forest of status IB and IC: area to be measured is 0.2 % of the total area of forest

### Sample plots

#### **Natural forests**

- Sample plot should have a surface of 500 m<sup>2</sup> (in rectangular form of 20 x 25 m or in round form with a radius (r) of 12.64 m)

#### **Bamboo forest**

For scattered bamboo forest :

- Sample plot has a surface of 100 m<sup>2</sup> (in square form of 10x10 m or in round form with a radius of 5,6 m)

For *giang* bamboo forest :

- Sample plot of 25 m<sup>2</sup> (5x5m)

For bamboo forests growing in clumps, the plot size is based on the area of 6 continuous clumps.

**Note:** *Sample plots and transects must be representative for the whole area including the different topographic locations in a survey area. Sample plots should therefore be selected at the foot, top and sides of the hills/mountains in order to get a comprehensive picture of the whole survey area.*

## Appendix 7: Conversion of length on sloping land to a horizontal image

The presented conversions are derived from the forest inventory curriculum issued by the Vietnam Forest University in 1992.

Length on sloping land (m)	Length 20 m	Length 25 m
Slope (°)		
10	19.70	24.62
11	19.63	24.54
12	19.56	24.45
13	19.49	24.36
14	19.41	24.26
15	19.32	24.15
16	19.23	24.03
17	19.13	23.91
18	19.02	23.78
19	18.91	23.64
20	18.79	23.49
21	18.67	23.34
22	18.54	23.18
23	18.41	23.01
24	18.27	22.84
25	18.13	22.66
26	17.98	22.47
27	17.82	22.28
28	17.66	22.07
29	17.49	21.87
30	17.32	21.65
31	17.14	21.43
32	16.96	21.20
33	16.77	20.97
34	16.58	20.73
35	16.38	20.48
36	16.18	20.23
37	15.97	19.97
38	15.76	19.70
39	15.54	19.43
40	15.32	19.15

## Appendix 8: Guidelines for the development of a land use plan and forest land allocation map

The following are the minimum requirements that should be shown on the land use plan map and the forest land allocation map (according to Technical guidelines from FIPI (1997)).

Name of map: Land use plan map or forest land allocation map

Location: village, commune, district, province

Forest classifications according to functions

- Protection forest
- Special use forest
- Production forest

Land use planning

- Protected areas
- Protection forest
- Forest plantations
- Agricultural land
- Grazing land
- Construction land
- Land for fruit tree plantation
- Land for annual crop
- Water surface land

Forest land allocation (FLA)

- FLA for households, groups of households, communities and organizations, etc
- Forest land which has not been allocated or is not allowed to be allocated

<b><i>Land use planning</i></b>	<b><i>Color</i></b>
Natural forests	Green
Planted forests	Orange
Barren land	White
Rocky/lime stone mountains without trees	Grey
Agricultural land	Yellow
Grazing land	Brown red
Residential land	Brown
Water surface	Blue
Forest area to be protected (conservation and protection)	Dark green
Rivers, streams, ponds	Dark blue
Road	Red
Railway	Black and white
Boundaries between villages, communes and districts	Black
Name of village, rivers and mountains	Black
Name of the area	Black
Parameters written in plots	Number, status, land use plan, area, name of household/forest user

<b>Forest land allocation</b>	<b>Lines</b>
- To households	Crossing lines
- To groups of households, communities	Vertical lines
- Social organizations	Horizontal lines

The following symbols are used to describe forest land:

Production forest: SX

Protection forest: PH

Special use forest: DD

Boundaries that should be clarified on the map include:

- Commune boundary
- Village boundary
- Forest status boundaries
- Boundaries of plots/forest users
- Boundaries identified according to the land use plan