MANAGEMENT AND UTILISATION OF FOREST RESOURCES IN CENTRAL HIGHLANDS

SITUATION AND SOLUTIONS

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INTRODUCTION

In order to get more knowledge about forestry activities in Central Highlands (Kon Tum, Gia Lai, Dak Lak and Lam Dong provinces), with the special focus put on community forest management, SMRP co-operated with Social Forestry Support Program of Tay Nguyen University to organise an information collection in agencies, government and non-government organisations which are conducting forestry activities as well as activities relevant to farmers' participation in forest activities or community related activities, in order to reach sustainable living and sustainable cultivation, gradually reducing pressures on forest resources.

Based on collected papers and documents, community forestry development in Central Highlands was analysed and documented.

The mission tried to seek agencies, organisations, projects, programs... who are conducting activities related to community development in rural mountainous areas, and collect as much as possible relevant documents, therefore at the first step, basic information on general forestry development in the area has been collected. However, due to the limits in time and funds, the mission couldn't manage to have detailed discussions with informants to further explore about the facts as well as their experiences, advantages/disadvantages and expectations. This is one of shortcomings of this mission.

Besides, on such large area and with unsystematic database in most of agencies, some relevant information was surely missing in this mission. At the same time, the topic was rather large-scaled, therefore a wide range of papers and documents was collected, and this is also a problem in systematising during analyses and documentation.

This report mainly describes and systematises forestry activities in forest resources management and utilisation in the 4 provinces of Central Highlands. The analytical framework is based on 4 key topics:

- Changes in forest resources, forest land and causes
- Subjects, communities and other organisations related to forest resource usage/management
- Influences from outside
- Benefits of communities and relevant bodies from forest resource management

2.1 Socio-economic characteristics

Central Highlands include 4 mountainous provinces: Kon Tum, Gia Lai, Dak Lak and Lam Dong, with the total natural area 54,549.45 km². Population 3,604,575 persons (up to December 1997). Central Highlands border with Quang Nam province in the north; Laos and Cambodia and Binh Phuoc province in the west; in the east this area borders with coastal provinces of middle and south parts from Quang Ngai to Binh Thuan provinces; in the south it borders with Dong Nai province. In Central Highlands, there are more than 20 indigenous ethnic groups, they have specific cultural traditions. The major part of ethnic minorities has been closely linked with forest from generations.
Population of Central Highlands has been increasing rapidly lately, partly due to natural increase and particularly due to uncontrolled migration from other provinces. Population growth creates a big negative pressure on forest resources. Moreover, uncontrolled migration creates many difficulties for local authorities in management and development planning. As the climate and land in Central Highlands are very suitable for some industrial crop species, such as coffee, rubber, tea... therefore this is one of the main reasons leading to area expanding to industrial crops beyond control of local authorities. In Dak Lak province only, coffee area in 1990 was 69,641 ha, but this figure increased to 164,988 ha in December 1997.

Infrastructure in Central Highlands is poorly developed, due to specific topographic conditions of mountainous and midland areas. The system of schools, roads, health centres is bad in comparison with delta provinces, particularly for remote areas and ethnic minorities areas. By December 1997, there were 557 health centres in 574 communes and towns. In the school year of 1997-1998, there are 30,390 teachers in the whole area and 526,145 pupils. Healthcare and educational conditions are poor, and education level of local inhabitants is low, therefore their knowledge and awareness of environmental and natural resources protection is still limited.

Transportation system is a big problem especially in rainy season. The major part of roads from the centre of districts to communes is earth roads. Communication system is still poor due to the shortage in investment and allocation to population zones. This has negative impacts on the consumption of products of local people.

2.2 Forest resources and forest land

Central Highlands is the area whose area is largest in the whole country. The area of forests is 3,168,100 ha with the rate of forest cover 56%, of which:

- Gia Lai province: forest cover 38%
- Kon Tum province: forest cover 75%
- Dak Lak province: forest cover 62%
- Lam Dong province: forest cover 57%


Forest in Central Highlands is abundant in forest types: evergreen tropical forest, dry open forest, semi-deciduous forest, bamboo forest and vegetation cover on high mountainous areas... This is where Indochina fauna lives. Abundance and high rate of forest cover brings big benefits to people. Moreover, forest is closely linked with living of many communities in Central Highlands.

The inventory of forest resources and forest land is difficult due to the following factors:

- bad unsystematic data base
- data is different from different surveys
- re-demarcation of administrative boundaries in Central Highlands in accordance with Instruction 364/CT of the Prime Minister
- re-classification of forestry and agricultural land in accordance with Decision 307/QDUB of the former Ministry of Forestry
The above objective factors make the survey on forest resources very difficult. Sometimes, increase or reduce in forest area is due to re-demarcation of boundaries between provinces, or due to re-classification of forest and agriculture land.

Based on the statistical book and various data sources of DARD and Forest Protection Departments of provinces, forest land area (after re-demarcation of administrative boundaries and re-classification of forest land and agriculture land) in each province in 1997 is described in Table 1.

### Table 1. Forest land area in the 4 provinces of Central Highlands (unit: ha)

<table>
<thead>
<tr>
<th>Province</th>
<th>Total area of forestry land</th>
<th>of which</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Forest land</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Natural forest</td>
<td>Plantation forest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gia Lai</td>
<td>1,067,470</td>
<td>850,508</td>
<td>835,074</td>
<td>15,434</td>
<td>216,962</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kon Tum</td>
<td>909,133</td>
<td>616,054</td>
<td>602,274</td>
<td>13,780</td>
<td>293,079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dak Lak</td>
<td>1,431,352</td>
<td>1,226,478</td>
<td>1,208,478</td>
<td>18,000</td>
<td>204,874</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lam Dong</td>
<td>708,330</td>
<td>599,557</td>
<td>579,857</td>
<td>19,700</td>
<td>108,773</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,116,285</strong></td>
<td><strong>3,292,597</strong></td>
<td><strong>3,225,683</strong></td>
<td><strong>66,914</strong></td>
<td><strong>823,688</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abundance of forest and land facilitated the process of exploitation. After several decades, forest exploitation led to reduced quality of forest, clearing of land for agricultural purposes led to a reduction of forest area, which impacted strongly on the process of sustainable development. Among about 4 million ha of forestry land in Central Highlands at present, nearly 1 million ha is bare land without forest cover.

The process of changes in fact is not simply the reduce in forest area and quality, degradation of biodiversity due to various factors, but in fact, in each area exists also regeneration process through oriented protection, rehabilitation of ecosystems, or increase of forest cover by afforestation, agro-forestry… Therefore, when reviewing changes in forest resources, it is needed to consider both aspects: positive and negative. (Forest Inventory and Planning Institute: Basic characteristics and changes in forest resources of Central Highlands, 1996; Bao Huy: Evaluation of existing forest and forest land management as the basis for recommendations on sustainable resource use in Dak Lak, 1998).

**1.1 Causes of positive changes in forest resources**

- Natural regeneration: the capacity of Central Highland forests for natural regeneration is very big, therefore, if oriented protection and prevention of forest fires are conducted properly, forest rehabilitation by a natural way is fully feasible. Natural regeneration is focused for the following types:
  - forest after selected exploitation, i.e. after exploitation, mother tree is maintained to give seeds
1.2 Causes of negative changes in forest resources

Forest in Central Highlands is gradually pushed higher and higher on high mountains and peaks, its area is getting smaller and smaller. According to the data of FIP (up to 1995), the changes in forest resources of Central Highlands are described in Table 2.

Table 2. Changes in forest resources during periods

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Timber forest</td>
<td>3,387,100</td>
<td>3,087,500</td>
<td>2,888,500</td>
<td>2,688,200</td>
<td>2,626,600</td>
</tr>
<tr>
<td>2. Mixed timber + bamboo forest</td>
<td>169,500</td>
<td>135,200</td>
<td>115,100</td>
<td>89,400</td>
<td>161,100</td>
</tr>
<tr>
<td>3. Bamboo forest</td>
<td>164,300</td>
<td>300,000</td>
<td>380,100</td>
<td>471,300</td>
<td>321,200</td>
</tr>
<tr>
<td>II. Plantation forest</td>
<td>15,300</td>
<td>32,500</td>
<td>45,600</td>
<td>59,200</td>
<td></td>
</tr>
<tr>
<td>Total forest area</td>
<td>3,720,900</td>
<td>3,538,000</td>
<td>3,416,200</td>
<td>3,294,500</td>
<td>3,168,100</td>
</tr>
</tbody>
</table>

Data in Table 2 differs from that in Table 1 because this is the old data before re-demarcation of provincial boundaries and re-classification of forest and agriculture land; however, this data is temporarily accepted in order to review the changes in forest resources until the old data has been revised.

On absolute data, in comparison with 9 forestry zones in the whole country, Central Highlands is the zone with biggest lost forest area. From 1976 to 1996, on average 27,600 ha of forest was lost annually.
**Graphic 1**

Forest area over periods

![Forest area over periods graph](image)

**Graphic 2**

Area of lost forest over periods

![Area of lost forest over periods graph](image)
Area of lost forest over periods
In the period 1976-1990, annually Central Highlands lost about 30,400 ha of forest. In 1991-1995, the speed of forest loss reduced, but was still on alarming rate: 25,200 ha annually.

During 1995-1997 (according to statistical data of Lam Dong provincial PC, Table 3), the area of forest loss reduced compared to the previous period 1991-1995. In the last 3 years, Central Highlands lost 5,000 - 10,000 ha of forest, of which in 1996 the loss of forest was highest.

Table 3. Area of lost forest in 1995-1997

<table>
<thead>
<tr>
<th>Province</th>
<th>1995</th>
<th>1996</th>
<th>1997</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dak Lak</td>
<td>555</td>
<td>4,644</td>
<td>2,671</td>
<td>7,869</td>
</tr>
<tr>
<td>Gia Lai</td>
<td>1,235</td>
<td>2,058</td>
<td>159</td>
<td>3,452</td>
</tr>
<tr>
<td>Kon Tum</td>
<td>3,332</td>
<td>516</td>
<td>295</td>
<td>4,143</td>
</tr>
<tr>
<td>Lam Dong</td>
<td>1,890</td>
<td>1,890</td>
<td>1,890</td>
<td>5,670</td>
</tr>
<tr>
<td>Total</td>
<td>7,012</td>
<td>9,107</td>
<td>5,015</td>
<td>21,134</td>
</tr>
</tbody>
</table>

(The area of forest loss in Lam Dong province was calculated on average, because annual data is missing).

Among the 4 provinces of Central Highlands, Dak Lak has lost the biggest area of forest in the past 3 years, then Gia Lai, particularly in 1996. In Kon Tum province, the situation is better, the area of forest loss is reducing.

The statistics of forest loss partly proved environment degradation due to resource degradation. Therefore, it is needed to review the following factors:

- Change of forest land to agriculture land, particularly unplanned development of industrial crops, such as coffee, or expanding of rubber, cashew…

Some forms of changing from forest land into agriculture land in Central Highlands:
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- forest logging to plant industrial crops immediately
- forest logging for upland fields, followed after some years by planting of industrial crops
- forest logging to plant industrial crops and food as intercrops at the same time

• Long term excess forest exploitation leading to the loss in forest cover
• Rapid population growing rate (migration from northern provinces) contributed to the increase in land use demand, which creates a pressure on natural forests in remote areas.

• Economic development programs
  • Upland cultivation: in fact, upland cultivation within a community with closed shifting cultivation cycle (rotation cultivation) is a traditional cultivation method, which includes many experiences on sustainable cultivation, in which forest - land is rehabilitated well during the fallow period. However, population migration and thereby mechanic population growth led to land encroachment for cultivation. This broke down the traditional cultivation cycle, forced people to go deeper into the forest, clear more forest for cultivation fields and land shortened the fallow period. Thus, forest area is smaller and smaller, living conditions of people are worse and worse, as they have to go very far to the fields and have to bear more and more food shortage.

• Policy issue plays a very important role. In fact, so far, real owners of forest have not been clarified. Some forest enterprises paid little attention to forest protection, nourishment, regeneration, afforestation, whereas focusing in overload exploitation... The policy of forest assignment to farmers is not really efficient, farmers’ responsibility in forest protection/management has not been promoted as real owners.

• Insufficient regulations on forest land allocation and use hamper the socio economic development as well as process of seeking a more appropriate and sustainable cultivation method.

1.3 Impacts of forest resources degradation

The degradation in forest area and quality led also to the degradation of land resource and water regulating capacity.

The feature of Central Highlands is that it has the largest and most concentrated basaltic area in the whole country. The area is 1.4 million ha, concentrated on 5 plateaux: 98,000 ha on Kon Ha Nung plateau; 344,000 ha on Pleiku plateau; 334,000 ha on Buon Ma Thuot plateau; 430,000 ha on Dak Nong plateau and 195,000 ha on Di Linh-Bao Loc plateau. Basalt is a good soil type, with high fertility, which is suitable with long-term, high economic value crops, like coffee, pepper, tea, rubber...

Land in Central Highlands is an important natural resource, so far, land use has been getting better in order to promote and maximize available potentials. However, in fact, the expansion of land area for agricultural production in some locations not only was inappropriate with potentials, but also led to the degradation of environment.

At present, there are more than 1 million ha of exhausted basalt soil. Basaltic area under forest cover reduced to more or less 35%, basalt under crops 11%, under industrial crops - about 7%. The cause is forest logging for upland fields, unreasonable land use, backward cultivation method, soil erosion...

In Central Highlands, broad-leaved evergreen forest accounts for the largest area, with many storeys, various species, many age levels... It plays an important role in soil erosion control, protecting water
Management and Utilisation of Forest Resources in Central Highlands - Situation and Solutions

supply for crops and living. This has a big meaning in Central Highlands, where the area of industrial crops is very big, but underground water source is rather deep. Dipterocarpaceae dry open forest has usually simple composition, few storeys, which is located on exhausted land with thin soil layer and therefore bad water maintaining capacity. During the past, the quality of evergreen forest in Central Highlands has been reducing strongly, the area of Dipterocarpaceae forest increased, while the total area of forest also reduced. This shows the reduction in economic value, and moreover, the degradation of environment, reduction in soil, water and biodiversity protecting capacity.

What is more, one feature of Central Highlands is that it has long rainy season with concentrated, continuous and heavy rainfall. In dry season, it is affected strongly by South-West monsoon at high speed. Therefore, soil is easily eroded in both seasons in a year. In those places where forest cover is lost, soil is eroded strongly in rainy season; in dry season, water is easily drained from the soil, therefore soil erosion because of wind is also very strong.

The surveys on soil erosion show:
- In those places without forest cover: 20 tons soil per ha is lost annually on sloping degree 10°;
- 114 tons/ha annually on 14° and 200 tons/ha annually on sloping degree 20°.
- 1-storey natural forest (Dipterocarpaceae): on sloping degree 14°, 3.4 tons/ha is lost annually
- Natural forest with 2 or 3 storeys: on sloping degree 14°, about 1.3 tons/ha is lost annually.

The above data shows that in those places, where forest cover is lost, soil erosion is very strong, particularly it increases according to sloping degree. This is a very important issue to be considered in protecting forest on high and steep mountains. Broad-leaved evergreen forest plays a very important role in soil erosion control and water protection. Therefore, protection of existing forest base combined with facilitating natural regeneration is the most effective approach in Central Highlands, both in economic and environmental terms.

1.4 Solutions to maintain and develop forest stocks

Based on the above mentioned factors, it is needed to put forward some solutions in order to maintain and develop forest, contributing to sustainable development of forestry and agriculture. The described solutions reflect the statements of interview partners and the statements found in the report. They do not necessarily reflect the opinion of the authors.

- The main objective is to develop social forestry and community forestry. With the assistance of projects, programs, it is needed to create material and technical basis to promote indigenous knowledge, strengthen self-help capacity, develop sustainable cultivation methods and improve living standards.

- In the process of fixed cultivation and sedentarisation, traditional culture of farmers needs to be taken into account, as some ethnic groups in Central Highlands don’t practice shifting cultivation, therefore it is needed to pay more attention to develop Agriculture and Forestry suitable for each ecological and civilisation sub-areas. The most important issue is upland cultivation. With existing limited land base (land of upland fields is used for industrial crops), upland field cycle broken, if the situation is not controlled, more protected areas and protection forests will be logged to satisfy food demand. Therefore, it is needed to find out a mechanism of community natural resources management. Integration of indigenous knowledge and advanced technologies in agriculture and
forest is a suitable solution to develop and protect environment and resources in a sustainable way.

- It is needed to strengthen and improve agriculture and forestry extension, develop models to help ethnic minorities and rural mountainous communities develop. Attention should be paid to training of local extension officers. Forest enterprises need to cooperate with extension stations at district levels to conduct forest protection/development jointly with the communities.
- It is needed to review policies on forest protection/management, forests need to have real owners.
- Appropriate policies on farmers' benefits are needed for participating farmers in afforestation. Credit privilege should be applied to grow long term crops, develop remote areas.
- Implementation of laws on forest protection should be strengthened.
- Education in general and environmental awareness in particular should be improved.
- Afforestation of area assigned for protection forest and production forests should be facilitated in order to reduce fuel wood pressure on natural forests.
- Timber processing should be improved.
- Forest enterprises should be restructured and the local people should be more involved in decisions and management in the forestry sector.
- Further develop forest research and experimental works as well as sylvicultural techniques for each forest type.
- Carry out sustainable forest management based on national criteria and principles; issue land titles to production forests.

### 3.2 SITUATION OF FOREST RESOURCES MANAGEMENT AND USAGE

 SUBJECTS, COMMUNITIES AND BODIES RELATED TO FOREST RESOURCE USAGE/MANAGEMENT

Central Highlands include 4 mountainous provinces: Kon Tum, Gia Lai, Dak Lak and Lam Dong, with the total natural area 54,549.45 km². Population 3,604,575 persons (up to December 1997). Central Highlands border with Quang Nam province in the north; Laos and Cambodia and Binh Phuoc province in the west; in the east this area borders with coastal provinces of middle and south parts from Quang Ngai to Binh Thuan provinces; in the south it borders with Dong Nai province. In Central Highlands, there are more than 20 indigenous ethnic groups, they have specific cultural traditions. The major part of ethnic minorities has been closely linked with forest from generations.

#### 3.12.1 Implementation of policies related to forestry development and community forest management Population situation and migration problem

At present, population of Central Highlands is 3.6 million, of which 2.7 million, i.e. 75% of the total population, are living in rural areas. The population growing rate has reached 5% in the last period. Population is concentrated mainly in rural, mountainous areas, practising mainly natural resource depending agricultural and forestry production. However, due to spontaneous and untimely
production planning, large forest area was cut for cultivation land.

Ethnic minority groups live mainly in mountainous areas, including: Gia Rai (10% population), E De (7.8%), Banar (5.3%), Se Dang (2.9%), M’Nong (2.2%), Co Ho (3.6%), Gie Treng (0.8%); some ethnic minority groups have very few people, like Brau, Ro Mam ethnic groups have only 200 - 300 people. During migration process, more and more ethnic people came to Central Highlands from the north, which made ethnic communities in Central Highlands more diversified. So far, there are more than 37 ethnic groups living together in the area. In Gia Lai and Kon Tum provinces, ethnic people account for 50% of population.

Planned migration with supports from the state during the past contributed to economic development of the region. 0.5 million ha was expanded for agricultural production, of which 274,000 ha used for food production; about 120,000 ha used for coffee cultivation... 15 districts, 159 communes, hundreds irrigation constructions, thousands kilometres of intra-regional transportation roads, hundreds of school and health centres... were established.

Nevertheless, so far, many areas in Central Highlands are still desolated, populations is scattered. The average population density is about 60 persons per km$^2$. Therefore, an new and more effective mechanism of migration receiving should be applied to limit the shortcomings of current uncontrolled migration.

This made population of Central Highlands increased rapidly lately, partly due to natural increase and particularly due to uncontrolled migration from other provinces. Population growth creates a big negative pressure on forest resources. Moreover, uncontrolled migration creates many difficulties for local authorities in management and development planning. As the climate and land in Central Highlands are very suitable for some industrial crop species, such as coffee, rubber, tea... therefore this is one of the main reasons leading to area expanding to industrial crops beyond control of local authorities. In Dak Lak province only, coffee area in 1990 was 69,641 ha, but this figure increased to 164,988 ha in December 1997.
### Table 4: Statistics on population in the 4 provinces of Central Highlands

<table>
<thead>
<tr>
<th>Province</th>
<th>Total population</th>
<th>Urban</th>
<th>Rural</th>
<th>Kinh</th>
<th>Gia Rai</th>
<th>Banar</th>
<th>Se Dang</th>
<th>Gie Treng</th>
<th>Brau</th>
<th>Ro Mam</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dak Lak</td>
<td>1,515,367</td>
<td>282,104</td>
<td>1,233,263</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lam Dong</td>
<td>913,775</td>
<td>346,071</td>
<td>567,704</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gia Lai</td>
<td>891,681</td>
<td>202,788</td>
<td>688,893</td>
<td>453,353</td>
<td>305,569</td>
<td>119,256</td>
<td></td>
<td></td>
<td></td>
<td>13,503</td>
<td></td>
</tr>
<tr>
<td>Kon Tum</td>
<td>290,001</td>
<td>41,932</td>
<td>248,069</td>
<td>138,560</td>
<td>14,779</td>
<td>138,560</td>
<td>70,518</td>
<td>23,507</td>
<td>293</td>
<td>299</td>
<td>70,518</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,610,824</strong></td>
<td><strong>872,895</strong></td>
<td><strong>2,737,929</strong></td>
<td><strong>591,913</strong></td>
<td><strong>320,348</strong></td>
<td><strong>151,612</strong></td>
<td><strong>70,518</strong></td>
<td><strong>23,507</strong></td>
<td><strong>293</strong></td>
<td><strong>299</strong></td>
<td><strong>23,232</strong></td>
</tr>
</tbody>
</table>

*Unit: person*
For example:

- In Dak Lak province: within 20 years, population increased from 350,000 to 1,400,000. Uncontrolled migration: 72,322 households with 349,527 persons. Population pressure hangs on land base and needs for forest logging for cultivation land increased strongly. Together with population growth, shifting cultivation custom is a big problem, despite of state efforts in sedentarisation and fixed cultivation propagation. In the province, there are still 13,290 households with 76,397 persons practising shifting cultivation, besides there are 7,387 households of migrants also practise shifting cultivation. (report of Dak Lak DARD)

- In Lam Dong province: forest logging is strong due to shifting cultivation by both planned and uncontrolled migrants.

2.2 Organisations, communities and others related to forestry management at present*

2.2.1 State-owned enterprise (forest enterprise, agriculture enterprise, forestry company...)

The system of forestry management is mainly state-owned, located in almost all districts with large area of natural forest. Their main tasks is timber exploitation, and the scale and outputs of silvicultural works are minor. State-owned forest enterprises include:

- Timber exploiting forest enterprises
- Afforestation for commercial use forest enterprises
- Afforestation for protection and enrichment forest enterprises
- Forest products exploiting and processing companies, including:
  + local enterprises
  + non-state enterprises
  + state enterprises under central management

State-owned forest enterprises are responsible for management of large forest areas, in which investments are made for socio-economic development. There are many state-owned enterprises working in timber processing.

State-owned forest enterprises are under management of provincial and district level and not under direct management of any enterprise, therefore there is a lack of responsibility. Though forest protection system is organised from provincial to district level, however, it isn’t strong enough to control forest logging and illegal trading of forest products.

The situation of forestry management in the form of state-owned forest enterprises shows:

- Some SFEs just pay attention to accomplishing timber exploitation norms, not to socio-economic development activities.
- During implementation of afforestation tasks, 327 program, Decree 01, Decree 02, many SFEs cooperated with local level to involve farmers in forest protection and afforestation.
  + Create employment opportunities through assignment for afforestation, forest tendering and
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- Protection of plantation forests
  - Assignment for protection of natural forests
  - Allocation of forestry land for agricultural and forestry production
  - Support communities to improve infrastructure from funds of 327 program, hunger eradication and poverty alleviation program, fixed cultivation and sedentarisation program; provide technical services and supports in agriculture/forestry
  - Improve awareness on environmental and resource protection

Besides the achieved results, some shortcomings do exists in forestry management linked with community benefits:

- Natural forest and plantation forest are mainly under management and usage of state agencies, therefore, farmers' participation in activities is weak. Farmers are separated form responsibilities and benefits of forest development and protection.
- Farmers participate in afforestation mainly as labour hirers, therefore they are not fond of benefits from the forest.
- The mechanism of assignment for natural forest protection sometimes just follows norms, funds are provided untimely, assignment carried formal character. Particularly, responsibilities and benefits of forest protectors are not reasonable, therefore many natural forests were lost even after been assigned.
- SFEs got used with centralised management method, they therefore have not promoted the role, experiences and knowledge of farmers in forest protection/development. Local farmers are still separated from management system. Therefore forest land and forest resources are not fully managed, though there are various agencies participating in forest protection, such as forest protection units, forest enterprises...

In the coming time, the organisation of SFEs will be changed in accordance with Decision 852/TTg. For example, in Dak Lak province, it is proposed to organise SFEs in 3 forms:

- SFEs working with commercial purpose and both end services. This type mainly operates in forest commerce, cooperates and supports communities in production and products consumption.
- Project management units
- Public forest enterprises. These are mainly FE in protection forests, operate in accordance with the state plans and involve farmers’ participation in forest protection/ management, afforestation.

Thus, in proposed changes of organisation and operation form of SFEs, the identification of their role as well as linkages between SFEs and communities are oriented. SFEs organise social forestry activities, community forestry, support communities in services, production.

However, the issue of community forest management is not yet clearly addressed. The question is how to address the relation between community and SFEs in resources usage/ management.
2.2.2 Management units of national parks, nature conservation areas

Over the past few years, the State planned and invested in many nature conservation areas and national parks in Central Highlands, with the purpose to protect biodiversity, natural resources and environment. Besides nature conservation, protection of valuable rare animal and botanical species, the operations of the above mentioned management units include also socio-economic development in buffer zones.

The socio-economic development programs in buffer zones carried out some main activities:

- Support for socio-economic development, infrastructure improvement
- Agriculture and forestry extension. Provide privilege credits for production development
- Assignment for forest protection/management
- Improve awareness on resource and environment protection
- Participatory rural appraisal activities were carried out in some buffer zones to identify solutions for stable production and community forest management in buffer zones.

However, due to limited investments, these programs focused only in supporting production, agricultural/forestry extension; participatory forest management is just in the very first stage, which needs to be expanded to the whole area.

2.2.3 Forest management/commerce in the form of farms, joint-ventures

Following government strategies and policies on involving economic components in afforestation, forest commerce, with the purpose to mobilise every possible human and fund source for afforestation/forest development, over the past few years, some households have received land and established farms for afforestation, agro-forestry; some joint-ventures planted material forests in Central Highlands.

However, forest farms, forest gardens are still minor in Central Highlands due to various reasons: ethnic groups don’t have enough inputs to develop farms; for their food needs, they can’t plant forest with long cycle; there is a lack of experience on agro-forestry models development, whereas forestry extension nearly does not exist in this field, particularly in consuming market; plantation of material forests has not been conducted on planned areas, products of afforestation are scattered, not concentrated, which caused difficulties in consumption, export, which in its turn limited inputs into forest farms.

2.2.4 Local public organisations operating in forest management:

In accordance with state regulations on forest and forest land management, each commune established its Forestry Unit, which is responsible for management, protection and development of local forest base. This unit is to cooperate with state functional agencies in forest protection, such as Forest Protection Department, Forest enterprises… However, in fact, Forestry Units exist only by name, they haven’t got their salary funds and clear operational plan. There are many overlaps and mix up between commercial production management and state management of local forest enterprises. Local authorities usually consider forest protection is the responsibility of forest enterprises or forest protection units, therefore they are lacked of responsibility.
Moreover, during a long period, forest and forest land was allocated mainly to state agencies for management/usage, separated for local communities. This limited farmers’ participation in forest protection.

Recently, the state had had various policies on re-classification of agricultural and forestry land, clarification of responsibilities of forestry agencies, encouraging farmers to participate in forest protection and development: allocation of forestry land for agricultural and forestry production development, assignment for forest protection, community forest management… Thus, the role of local communities has been improved in forestry activities.

At present, the issue of community usage/management of natural forests is being tried to seek a suitable mechanism. For example, Dak Lak province conducted a trial program on allocation of natural forest to households and communities for long term on 2,000 ha in Ea H’Leo Forest Enterprise.

Besides, projects/programs working in rural development also carried out studies and activities in order to find out solutions and recommendations for forest management method with participation of local farmers/communities in project sites.

Public organisations in forestry field also encouraged local farmers/communities to plant forest scattered in villages, on upland fields, cultivation land… Seedlings are supplied to local communities by forestry agencies, forest protection units.

2.2.5 Forestry, agriculture extension units

At present, a network of agricultural and forestry extension from provincial level to district level and some communes with collaborators has been established in Central Highlands.

Though these units are called agricultural and forestry extension units, however, during the past, they conducted mainly agricultural extension works. Forestry extension, community access for forestry extension to encourage local communities, farmers to participate in forest management/protection were not conducted by these units. Almost all activities relevant to forestry were conducted by forest enterprises.

Some characteristics of agricultural and forestry extension units in Central Highlands:

- Quantity: in general, there is a lack of staff:
  - Serious lack of agricultural and forestry extension officers at local level (commune, village)
  - Low ratio of female staff in agricultural and forestry extension. For example, in Agricultural Extension Centre of Kon Tum province, 28 in the total 78 staff are women. At the same time, ratio of ethnic minority staff is also low; for example, in the said centre, only 2 in the total 78 staff are from ethnic minority groups

- Quality:
  - Lack of community access skills
2.2.6 Social structure of Central Highlands communities. Principles, traditional rights, community solutions in forest usage/management

In Central Highlands presently there are 3 main population groups: Kinh group, local ethnic group and ethnic minorities group migrated from northern mountainous areas.

a. Local ethnic minority communities

Ethnic minority communities in Central Highlands have specific characteristics in production organisation, livelihood… which need to be reviewed thoroughly in planning for community forestry development:

- Production, livelihood: slash and burn cultivation is the main source for food. Upland fields are usually considered as shifting cultivation fields, but in fact, it is rotation cultivation with 8-10 years of fallow period. Besides, long before, Banar, Gia Rai and some other ethnic groups could use low land along stream side to cultivate wet land rice.

Usage of upland fields according to community regulations:

- Land distribution or selection of upland fields are conducted in accordance with traditional customs:
  - The question who cultivates on which land is discussed within a clan and decided by village headman.
  - Village headman divides living land and garden land, farmers reclaim upland fields
  - Land use on upland fields: upland fields are usually reclaimed along stream sides in the distance of 50-100 m. Farmers avoid logging in watershed forests for upland fields.
  - In the result, productivity of upland fields is getting lower and lower through years (20%/year)
  - Ethnic minority farmers are not familiar with wetland rice and industrial crops cultivation, which has a big affect to land use. However, together with the development of goods-oriented economy, some villages have learnt cultivation method of Kinh people; they reduced upland field cultivation, switched to coffee or wetland rice cultivation.

Forest products collecting and hunting play an important role in their life. Weaving (women) and knitting (men) are the two popular handicraft occupations.

Thus, dependence of ethnic minority communities in Central Highlands on forest is very big, from foods, clothing, house construction, household tools, production instruments…

- Social structure of ethnic minority groups

In the traditional society, ethnic groups in Central Highlands lived concentrated and their village must be near a water source. In general, they use natural resources to satisfy their daily needs, including forest, river, stream, land for cultivation, bare land and grass land for grazing...

Family has 2 major types: big family and small family. Depending to ethnic group, family can be matriarchal or paternal. Family head also following this is wife or husband.

Clan plays an important role in ethnic groups’ life.

Village is the highest social level in the traditional society, each village consists of various clans.
living together. The traditional village is self-managed in accordance with customs and structured as follows: village headman - village elders - sorcerer - land owner or forest owner.

There are two forms of ownership: collective and individual.

Thus, the major part of ethnic groups is still depending on forest. In accordance with the law on forest protection and development of Vietnam, the state manages forest and forest land; natural forest is owned by the state, but in fact, ethnic people still use forest in accordance with their traditions, despite that forest is located or not located to them. Some village received natural forest for protection under 327 program; these areas are protected from slash and burn cultivation thank to benefits from annual remuneration for forest protection, paid by forest enterprises to communities and households. Nevertheless, forest assignment was forced and did not take traditional land use into account. Therefore, planning of upland fields for afforestation, plantation of industrial crops or oriented for nourishment broke traditional land use planning. Due to food needs and traditional habits, communities continue to slash and burn other forests for cultivation.

- Actual planning of administrative boundaries at commune and village levels is usually different from land use agreements among communities, this makes the process of organisation for community forest management very difficult.

At present, approaches for forest allocation to communities and participatory land use planning is in the trial stage at some locations.

The problem is to organise community forest management based on traditional experience and regulations:

- Classify protection forest, production forest, identify cultivation land... based on local, indigenous experience and knowledge and community traditional land use. Integrate with agro-forestry development, cultivation on sloping land, intensive cultivation, crop diversification and fixed cultivation.

- Important traditions and traditional regulations in community forest management in Central Highlands: forest allocation at community level, by clan.

- It is necessary to review agreed boundaries between villages, as they are usually different from administrative boundaries.

- Community benefits should be clarified in forest/land allocation plan.

b. Kinh communities

Before 1945, native inhabitants accounted for 95% of the total population. In 30 years (1975), this figure reduced to 50%. Up to 1980, Kinh people came to almost every location in Central Highlands, accounting for 70% of the total population.

Kinh communities include:

- People came to Central Highlands before 1975: live mainly in urban areas, towns or concentrated as population groups; select good land for development of coffee, tea farms. These communities nowadays live further from the forest, providing mainly commercial services and producing goods.
People came to Central Highlands in the period 1975-1980: these are planned migrants in accordance with the state plan and strategy. They came from northern provinces and middle part of the country with the purpose to establish and develop new economic zones in rural areas of Central Highlands. Thus, new administrative units were established. Planned migration in that period contributed to the development of Central Highlands, as the state invested in infrastructure development, roads, cultivation area for food crops, vegetables, industrial crops...

These people usually live near the forests and mountainous areas, they receive forestry land for production, receive forest assignment for protection, establish forest gardens and farms.

Recently, due to market and export demand on coffee, pepper... and population pressure, Kinh people have to bear a short of land for cultivation. They have to go to local indigenous communities to buy upland fields to plant industrial crops, which often creates conflicts on land. Some Kinh people came to live within the communities of ethnic groups, which helps to facilitate the exchange of culture and experiences between Kinh and ethnic minority groups.

c. Communities of ethnic groups migrated from northern mountainous areas

At present, there are almost all northern ethnic groups in Central Highlands. They migrated by clan and reclaim land for cultivation. They usually chose remote mountainous areas to reclaim land for agricultural production. Cultivation methods are diversified in accordance with traditional habits of each ethnic, however they maintain the habit of depending on the forest: hunting, collecting...

2.2.7 Knowledge, skills, education and training

In order to facilitate rural development in general and community forestry in particular, training on production development, community access, improvement of awareness of resources protection plays an important role. Some training needs are summarised for subjects related to rural development (output of the survey on training needs by Tay Nguyen University, 1998):

a. For farmers

- Besides the expectations on material and credit supports to develop production, farmers, including even ethnic people, desire to master cultivation techniques for production development.
- They want their children to be trained on agriculture and forestry in order to contribute to their village development.

b. For agriculture and forestry technical staff

From the development strategy of agencies, it can be seen that there is a big demand for additional agriculture/forestry staff as well as social forestry officers. The statistics in this context are as followed:

- Shortage of staff in the agencies using graduates: for example, Gia Lai provincial agriculture extension centre has 41 staff at the moment, where as it needs 60 more staff. Gia Lai forest protection department has 300 staff, but for complementing the tasks they need 600 staff; Kon Tum Provincial Agriculture Extension Centre has only 24 engineers for the moment, but by 2005 they need more than 100 staff with university diploma.
- Shortage of engineers in forestry and social forestry at commune level. Each forestry unit at
commune level needs at least 1 social forestry engineer, thus 201 engineer in social forestry are needed for the whole Dak Lak province (201 communes), but so far almost none of the communes has an engineer.

- At district level, there is a need to have more engineers in agriculture, forestry, livestock. At commune level, staff with agriculture/forestry college or university degree are needed.

- Technical staff, field staff and extension officers need to improve their attitude/ skills/ knowledge:

  • **Knowledge:**
    - Indigenous knowledge of ethnic communities in Central Highlands should be studied in order to organise production, cultivation to suit specific conditions,
    - Methods of rural access and agriculture/forestry extension
    - Policies related to social forestry and community forestry development
    - Participatory land use planning
    - Gender knowledge
    - Cultivation on sloping land
  
  • **Skills**
    - Communication skills, information dissemination skills
    - Technical guiding skills in the field
    - Implementation of field projects
    - Implementation of policies and dissemination of laws and legal documents
    - Measurement and map using skills
    - PRA tools using skills
    - Survey on forest resources and recommendations on usage methods
    - Nursery skills, grafting and layering skills
    - Data collection, compilation and report writing skills

  • **Attitude**
    - Strengthen relationships with farmers, particularly poor farmers who have a very bad understanding on technical issues. They should be offered with chances to access and develop production.
    - Staff should have learning attitude, listen to the farmers, cooperate to reach best results.
    - Besides, it is needed to give opportunities for women to participate in training courses, village meetings... to achieve better results of extension works.
3 EXTERNAL INFLUENCES

3.1 Implementation of policies related to forestry development and community forest management

- During the past years, Vietnamese Government set out various policies and strategies in order to renovate management method on forest and forest land. Many approaches, in which farmers participate in forest protection/management were applied. Among these, it is needed to mention 327 program with the purpose to regreen bare land and denuded hills, protect forest, get use from coastal alluvial land... and then in accordance with Decision 556/TTg, the objective was changed and focused on afforestation and protection of protection and special-use forests.

- Dak Lak province: 1,230,883 ha of forest land was allocated to state organisations and households for production. However, in the whole province, only 2,309 ha was allocated to households, and the major part of forest land was allocated to state organisations with commercial purpose... 236,639 ha of forest was assigned to 5,900 households for protection/management.

- Gia Lai province: 93,354 ha was assigned to 2,843 households.

- Lam Dong province: 180,480 ha of natural forest was assigned to 6,500 households, of which about 5,850 ha was assigned to ethnic groups

- Kon Tum province: since 1993, 133,613 ha was assigned, which is 22% of natural forest.

Above data from the different provinces is inconsistent due to a lack of additional information in the underlying reports

Some advantages and shortcomings were recognised:

Advantages

- Contribute to income generation, create employment for local farmers through assignment for forest protection/management; income from afforestation remuneration from forest enterprises. The area of forest annual loss reduced.

- This policy in fact facilitates capital and material investments to develop home gardens, contributing to socio-economic development in remote areas.

Shortcomings

- Land allocation/forest assignment policy could not create motive force as farmers receiving assigned land are not the real owners, therefore they are not very much linked with the forest. (report of DARD)

- During implementation, illegal forest logging and slash-and-burn for fields still happened in the assigned areas.

Calculation method of growing rate is very complicated, not in line with present situation (report of DARD Gia Lai province)

- During implementation, it is obvious that there is a lack of some concrete guiding documents on farmers' benefits. Remuneration for forest protection per ha is not reasonable, therefore,
it could not attract farmers in forest protection. Besides, land allocated to some households was then sold and transferred, and the farmers returned to shifting cultivation (report of Lam Dong province)

- In the Plan for Land Allocation and Sedentarisation in the period 1997-2000, Kon Tum province evaluated advantages of forest assignment: reduce forest logging, forest fires, control forest logging for upland fields... Some shortcomings were also pointed out: due to assignment for protection only, therefore farmers didn't have interventions in forest, so comprehensive potential of existing forest was not promoted. Responsibilities of households to receive assigned forest were not clarified, which led to logging in assigned forest without sense of responsibility.

- In some locations farmers just received remuneration for forest protection, not land for cultivation. This has not established a basis for socio-economic stable development. The rate of remuneration is too low and it comes untimely (in some places no fund for implementation at all)

- During the process of forest assignment for protection, some problems arose, i.e. equality in assignment, some places received assignment, some places didn't receive.

- Forest is far from farmers' living place, which makes forest protection difficult to implement. Women didn't have chance to participate in forest protection.

- Responsibilities and benefits of forest managers have not been clarified, therefore in fact the area of assigned forest is continuing to reduce.

- The existing methods of forest assignment don't reflect farmers' benefits in forest protection/management

- The role of resource management organisations and the needs/expectations of communities were not considered

- The remuneration rate for forest protection is VND 30,000 - 50,000 is only the temporary solution. It is needed to calculate the value of plantation forest and natural forest, forest growing rate, conduct periodical monitoring on forest growth to calculate benefits of farmers.

- Policy on allocation of natural forest is more needed than the existing forest assignment for protection, so that farmers can actively contribute to forest development, i.e. rehabilitation, nourishment and enrichment.

There are some differences between Central Highlands communities in receiving allocated land and forest:

- Demand on land of Kinh people is usually higher, therefore they are more active in receiving land to develop cash crops

- Ethnic minority groups in Central Highlands usually pay attention to cultivation land, less attention is paid to forestry land. Some time land is sold to Kinh people. Some fallow fields are planned for afforestation or plantation of industrial crops by state agencies, therefore farmers have to log new forest for cultivation land.

327 program on assignment for forest protection/management: There are some shortcomings of this program: benefits of farmers, equality, effectiveness of assignment, different roles and

translated by Pham Thuy Co - SMRP
characteristics of different communities are not taken into account. In fact, assigned forest were lost, real owner of forests has not been identified... Further studies should be conducted to mobilise farmers to participate in forest protection, community forest management...

- Program of closing natural forest, 5 million ha afforestation, in accordance with Decree 02 on allocation of natural forest to households and communities

327 program will be finished and 5 million ha afforestation program will be started. The State just issued Decision 661/TTg on 29/7/1998 on objectives, tasks, policies and organisation for implementation of 5 million ha afforestation program, of which many points are suitable and convenient for community forest management/protection.

Information on the implementation of Decree 02 of the Government was collected from Dak Lak Forestry Development Division. Dak Lak is implementing trial program in Ea H'Leo forest enterprise on 2,000 ha; each household receives 10-20 ha and has the responsibility to protect and nourish forest under guidance of technical officers.

Benefits: are distributed according to allocated forest types: young forest, rehabilitation forest, poor forest, medium forest..., concretely:

+ Young forest: exploitable age 30-40 years, exploitation intensity 20%; farmers get 80% and state 20% from exploited products
+ Rehabilitation forest: exploitable age over 40 years; farmers can get 100% products upon exploitation
+ Poor forest: exploitable age 25-35 years; farmers can get 70%, state 30% of the products
+ Medium forest: exploitable age 10-15 years; farmers get 60%, state 40%

At the same time, bare land is allocated as living land and to develop home gardens.

Implementation method:

+ Discuss with farmers, allocate to households
+ Measure, mapping for allocation (can be allocated as community forest)

The actual situation shows that existing forest assignment for protection is not effective (forest loss, reduce in forest quality; the main reason is that real owner of forest has not been identified, farmers' benefits are not appropriate). Therefore, some pilot programs of allocation of natural forest to households and communities were implemented by organisations working in forestry sector. This is a progressive step, where farmer's role in forest planning is taken into account.

In Lam Dong province, in the plans for development in high mountainous rural areas, DARD defined activities related to communities in resource usage and management: participatory community development planning to identify needs for development; long term contracts for forest protection should be established, farmers should have appropriate benefits from allocated forests according to forest growing rate, they should have right to exploit some forest products from the forest allocated to them.

- Policy of organisation of forestry activities

At present, state management mechanism in forestry sector almost does not exist at commune and village levels. Unclear regulations, responsibilities were not clarified.
it can be said that regulations on the use of forests do not promote farmers’ self-help and ownership (Plan for renovation of organisation and management structure of forestry sector, Lam Dong province).

Sustainable, long term development strategies are not yet available, policies and mechanism of public and production forest enterprises have not been clearly identified, which causes many difficulties during operations.

- Policies on agriculture and forestry extension, hunger eradication and poverty alleviation, development of rural mountainous areas

Advantages:
- These policies supported in technical and financial terms for communities to improve capacity in production development, improvement of living standards and awareness level
- Farmers participated in training courses on cultivation methods, livestock, vegetation protection…
- Supports for communities: seeds (rice, coffee, hybrid corn…) cattle breed, technical literature and information, budgets (credits, funds for hunger eradication/ poverty alleviation, credits for women to do business…), investments in education, health care, transportation, power, water supply…
- Improve communities’ knowledge and skills: training, field workshops, models development and expanding, training of a network of collaborators in the field of agriculture/forestry extension to village level.

Shortcomings:
- Some farmers did not have proper understanding, relying on the state
- Training wasn’t conducted in time, in some places training was conducted at commune level and for men only (limited participation of women); information was formal and theoretical, applicability for communities is not ensured.
- There is a lack of extension officers at village level, so this wors is still limited.
- The policy on product consumption is not carried out, therefore farmers are not encouraged in production (particularly ethnic minority communities in remote areas)
- Low effectiveness of investment usage
- Concrete models are not available for reference
- Policy on allowance for field staff does not satisfy their needs
- Common guidelines on agriculture/forestry extension organisation are not available
- In fact, forestry extension has not been conducted due to:
  - Limited inputs
  - Lack of forestry staff in extension units
  - Long term of forest crops, unreasonable benefit policy

For all forestry development programs of provinces, the objective changed from forest resource
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exploitation to focus in forest protection and development. To develop social forestry, encouraging every economic component to participate in forestry activities, household is considered as the main motive force for sustainable development.

In general, policy implementation is conducted rather slowly in locations, benefits of local farmers are still low. Under Decree 02 and strategy for 5 million ha afforestation, forest is allocated to households organisations, community forest management is emphasised. However, concrete guiding documents are needed for better implementation, farmers’ role in forest management/protection should be taken into account.

3.2 Population pressure and uncontrolled migration

Population growing rate is rather high in Central Highlands.

- Dak Lak: within 20 years, population increased from 350,000 to 1,400,000. Uncontrolled migration: 72,322 households with 349,527 persons. Population pressure hangs on land base and needs for forest logging for cultivation land increased strongly. Together with population growth, shifting cultivation custom is a big problem, despite of state efforts in sedentarisation and fixed cultivation propagation. In the province, there are still 13,290 households with 76,397 persons practicing shifting cultivation, besides there are 7,387 households of migrants also practice shifting cultivation. (report of Dak Lak DARD)

- Lam Dong province: forest logging is strong due to shifting cultivation by both planned and uncontrolled migrants.

3.3.2 Cash crops and market demands

With population pressure and demand from industrial crop market, many forests and fields were destroyed to plant cash crops.

According to the report on agricultural and forestry development and rural socio-economic development in Central Highlands in the period of 1996-2000 and 2010 of the MARD: Central Highlands has suitable climate and land conditions for coffee, rubber, cashew, mulberry… Coffee became the key cash crop. In 1976, in the whole Central Highlands there were only 6,500 ha, but in 1995, this came up to 200,000 ha. However, unplanned coffee plantation led to water balance loss and forest loss, especially in Dak Lak province.

Dak Lak has to bear the strongest pressure of coffee, rubber, cashew, fruit trees… development by farmers and forest enterprises. Over the past 20 years, more than 76,000 ha increased for food crop cultivation and 79,000 ha for industrial long term crops. Overload unplanned development of industrial crops created unbalance in many areas: water shortage in rainy season, soil erosion, fertility loss, floods… which impacted also to coastal delta areas…

Besides, there were unexpected changes in the market, which had big impacts on production (price for coffee, cashew, pepper…). In remote areas, market for consuming agricultural products is limited, therefore farmers don’t feel assure to develop production and input in intensive production.
3.4.3.3 Influences of programs, rural development projects of government and non-government organisations

- **Project Sustainable Management of Resources in the Lower Mekong Basin (Dak Lak DARD)**
  The first phase of the project lasted from 12/1995 to 12/1997. This is one of the first projects in Dak Lak to conduct participatory interventions in rural development orientation. Using PRA tools to identify difficulties of 2 communes of Lak district, some confidence building measures were conducted: introduction of improved fuel-economy wood stoves; conduct extension for hybrid corn program, wetland rice program. The project is in first step of seeking methods for participatory land use planning and land allocation in accordance with Decree 02.

- **Project on Biodiversity Conservation and Rural Development (World Bank/ Vietnamese Government)**
  The project site include Chu Mom Ray Nature Conservation and buffer zones surrounding Cat Tien National Park and Chu Mom Ray Natural Conservation.
  This is a large-scaled project, implemented on 2 separated areas. In order to protect biodiversity, community development in buffer zones is addressed in details: community development planning, forest management through forest protection contracts between households and commune authorities, monitored by provincial Forest Protection Department.

- **Community-based Upland Resources Management project supported by Canada Government and implemented by Thu Duc Agro-Forestry College:**
  The program is based on PRA tools to identify community action plans and participatory technical development. According to evaluation of project implementers, phase 1 has gained good results: communities feel more confident in selection of resource management solutions, production is structured, living conditions are improved at first stage, food security is ensure in the location…

- **Development of social forestry models in Lam Dong province (under state-level scientific program code KN-03), phase 1992-1994 in Dasar and Lac Duong communes:**
  Developed models for households. Suitability of these models with the specific ecological-economic-civilisation conditions of the area is accepted by farmers.

- **Technology transfer project in Mang Yang district, Gia Lai province (1992-1994)**
  This is a technology transfer project based on agro- and forestry extension techniques. Some lessons learnt: participation of farmers is the decisive factor; it is needed to be prudential in introducing new technologies; selection of sample households to develop demonstration models proved to be unsuitable to Banar community; training for extension skills should be provided to local farmers; market is considered in application of good production methods…

- **Development of social forestry models in Central Highlands (Vietnam Forestry Science Institute, program KN-03, completed in 1994)**
  Contents: study theoretical basis of social forestry; develop 2 demonstration models (Takor commune, Kbang district, Gia Lai province and Dasar commune, Lac Duong district, Lam Dong province); recommend on policies supporting social forestry development.
Some points should be considered about community-based forest management:

- Land use planning just takes into account community and household benefits, but protection needs of the whole area or resource value at national level are not considered. This also needs to be emphasised in participatory land use planning.

- It is needed to review planning for forest enterprises, as this planning breaks traditional land use planning.

- Forest assignment for protection: farmers don’t have enough rights to ensure absolute security for assigned forests, therefore they don’t take full responsibility for forest loss.

- Regulations on reasonable usage of protection forest should be in line with management plan of protection forest in order to provide employment and generate incomes for farmers.

**Regional project on forestry and watershed protection forest management (Technical Assistance No. 24411-VIE of Vietnamese Government and Asian Development Bank): phase 1 from 11/6/1997 - 31/12/2003**

The proposed project area include about 1 million ha of Ba river watershed in Gia Lai and Phu Yen provinces, 100,000 ha of Chu river watershed in Thanh Hoa province and 10,000 ha in Truc lake area, Quang Tri province.

Objective: sustainable management of resources in the 3 watershed areas; generate incomes for farmers, especially ethnic minorities; hydroelectric power in streams; contribute to biodiversity protection.

The project has agricultural technical character, with the purpose to ensure food security for the project area, improve farmers’ living conditions, reduce to minimum shifting cultivation; control population growth.

Methodology: facilitate land allocation to households and individuals; reasonable land use planning; investments to biodiversity protection and income generation for farmers in watershed areas.

Land use planning and forest land allocation are based on micro level (village, commune, farmers) through participatory approaches. In watershed areas, soil capacity assessment is conducted by GIS and survey methods. This allows to expand agro-forestry scale and promote forest management models in accordance with land potentials and farmers’ preference.

So far, methodology on participatory planning has bee completed.

**Supports for Agro- and Forestry Development provincial level supported by New Zealand**

NZODA is committed for 5 years, divided into 2 phases (phase 1 - 2 years). The project carries out activities in 2 districts: Mang Yang and Kong Chro of Gia Lai province.

The main objective of this technical assistance is to promote self-help at commune level; develop long term human resource.

The project includes 3 main programs: support farmers, agriculture extension and training.

In general, the project works mainly in the field of agriculture extension training.

**Supports for Social Forestry by Tay Nguyen University**

This program is supported from Swiss Government, Tay Nguyen University is one of 7 partners.
Consulting organisation for implementation is Helvetas.

The program is in its second phase (1997-2001), implemented in the whole country, including 5 universities training for forestry engineers, Agriculture and Forestry Extension Centre of Hoa Binh province and Soil and Agro-chemistry Institute.

The program conducts 3 main activities:

- **Human resource development for social forestry development**, including: lecturers in Agriculture and Forestry Faculty, field staff, forestry extension officers, collaborators at village level. The objective of this activity is to improve social forestry training capacity in university, improve community access skills to carry out forest management, agriculture/ forestry extension effectively.

- **Knowledge improvement**: on the basis of PRA activities, integrate local indigenous experiences in production with advanced techniques approved by communities.

- **Information exchange**: collect data, literature related to social forestry; document experiences and results of relevant programs and projects. Establish data base, WEB site to exchange information and experiences in social forestry development.

*Project "Capacity strengthening in policy and management arrangement for ethnic minority communities in Vietnam": UNDP - VIE/96/018*

The project site include 4 upland provinces: Bac Thai, Kon Tum, Gia Lai and Dak Lak. The implementation duration is 20 months.

The project operates in the field of hunger eradication and poverty alleviation for ethnic minority communities through strengthening their capacity. The objectives is to (i) strengthen capacity of the Committee of Ethnic and Mountainous Areas at provincial and district levels in managing and implementing policies, planning for development and management in ethnic minority areas; (2) introduce new approaches to improve the effectiveness of rural services to meet the goals of ethnic minority communities; (iii) strengthen training for trainees in ethnic minority areas.

From reviewing the programs and projects being implemented in Central Highlands, it can be said:

- Since the beginning of 1990s, foreign donation for programs to develop community accessing methods, community based and participatory forest management. This is the first step to be basis for community-based forest management development. Benefits of farmers are better satisfied.

- These programs/projects contribute an important part to change approaches and thoughts of forestry sector and local organisations in carrying out strategies on participatory forest protection/management.

- However, the quantity of projects is still small with pilot sites at some communes and buffer zones. At the same time, they focus on extension works, and policy mechanism for farmers' rights is not addressed. The problem of management of natural forest is still open.
4 BENEFITS OF COMMUNITIES AND RELEVANT PARTIES IN FOREST RESOURCE USAGE/MANAGEMENT

At present, ethnic minority communities are facing a lot of difficulties in material and mental livelihood:

- Infrastructure conditions in Central Highlands are still very poor, partly due to the specific topographical conditions of mountainous and plateau areas. The system of schools, roads, health centres is poorly developed in comparison with delta provinces, particularly in remote areas where ethnic minority groups live. Up to December 1997, there are 557 health centres in the total 574 communes and towns. In school year of 1997-1998, there are 30,390 secondary teachers and 526,145 pupils in Central Highlands. Due to poor conditions of health care and education, with low educational level, the awareness of local people on environment and resource protection is very limited.

- Transportation system is difficult, particularly in rainy season. The major part of roads from the district centres to communes is earth roads. The communication system is also poorly developed due to a lack of investments and the scatter of population centres. Poor transportation also affected product consuming of local farmers.

Community forestry activities were conducted in different forms, though of small quantity and small scale, but contributed partly to the improvement of living conditions and environment. These activities included scattered plantation of forest, establishment of cooperatives in afforestation, community forest assignment…

With such low starting point of these areas, the state has been paying much attention to benefits of inhabitants in rural mountainous areas, used funds collected from forest exploitation to invest for communities. The sectors received investments, bringing benefits to communities:

- Infrastructure development: roads, schools, health centres
- Capital supports for production
- Agriculture extension for production development
- Fixed cultivation, sedentarisation
- Implementation of programs/projects in the field of rural development of mountainous and ethnic areas
- Health care and education programs

What benefit will community forest management bring to communities themselves and the whole society? Some aspects could be considered:

- Products, benefits

Local farmers and communities can benefit directly from forest products in their area, including:

- Fuel wood from plantation and natural forests after main exploitation
- Intensive cultivation on forestry land, crop diversification, agro-forestry, ensuring food security
- Fuel wood and non-timber forest products during nourishing process
Material for construction, clothing, medicines...

- Improve farmers' living standard, generate incomes in thinning and main exploitation periods.
- Benefits from community forest management will be community welfare for infrastructure development, economic and cultural development in the future.

**Social aspect**

- Create employment opportunities through forest protection, tendering, agro-forestry, thinning, enrichment, exploitation, processing of forestry and other products.
- Maintain cultural and community traditions.
- Create prerequisite for rural development in mountainous areas, create employment for labour sources. Contribute to rural industrialisation on the basis of agricultural and forestry products processing.

**Environment**

Forest management based on community agreement and participation will bring benefits in the context of environment:

- Protect and develop forest base.
- Reasonable and sustainable land use on the basis of local indigenous knowledge integrated with advanced agricultural and forestry techniques.

This is the basis for protection of water source, biodiversity, rehabilitation of degraded land, improvement of rural living environment.

5 INFORMATION GAPS IN THE FOUR TOPICS OF THE ANALYTICAL FRAMEWORK

Having collected available documents and information, the documentation and analysis were conducted in the aforementioned 4 topics of this report, and on 5th February 1999, a mini workshop was organised in Buon Ma Thuot by SMRP in order to review the report and identify information gaps. The mini workshop participants include:

1. Dr. Peter Taylor, consultant of Helvetas
2. Mr. Ruedi Felber, technical advisor of Helvetas
3. Dr. Bao Huy, Tay Nguyen University
4. M.S. Vo Hung, Tay Nguyen University
5. Mr. Tran Huu Nhi, SMRP
6. M.S. Y Well KSor, SMRP

The participants agreed on information gaps in each topic.

After the workshop, the authors of this report have reviewed the gaps in existing information, possibilities of collecting currently missing information as well as the importance of such information in identifying the forms of community forest management in Central Highlands.
### Table 5. Gaps in information, possibilities of collecting missing information and its importance in identifying forms of community forest management

<table>
<thead>
<tr>
<th>Topic</th>
<th>Gaps in information</th>
<th>Possibilities of further information collection</th>
<th>Importance in identifying community forest management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural Resources</strong></td>
<td>1. Statistics on forest area are different from actual situation</td>
<td>This will be collected from results of forest survey 1999</td>
<td>Less important</td>
</tr>
<tr>
<td></td>
<td>2. Difficulties in identifying influences of different forms of forest resources and forest land management (forest management and wood exploitation by forest enterprises, afforestation units, management of protection forest, special-use forest...)</td>
<td>It is needed to study and analyse the results of activities of management units of forest resources and forest land</td>
<td>Important, as it assesses the influences of forest management forms on benefits of communities</td>
</tr>
<tr>
<td></td>
<td>3. Lack of documents identifying management of forest resources and forest land by communities</td>
<td>Difficult to collect; it is needed to organise surveys among communities</td>
<td>Very important in order to identify existing forms of community forest management</td>
</tr>
<tr>
<td><strong>External Influences</strong></td>
<td>1. Lack of information on:</td>
<td>It is needed to conduct survey and evaluation in the field</td>
<td>Important Provides information on land needs</td>
</tr>
<tr>
<td></td>
<td>- land allocation in the field</td>
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<td></td>
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<tr>
<td></td>
<td>- what happens after land allocation?</td>
<td></td>
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<tr>
<td></td>
<td>- Usage of allocated land?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Lack of detailed reports on progress monitoring and output evaluation of forestry activities at all levels</td>
<td>Difficult to collect or not available</td>
<td>Important</td>
</tr>
<tr>
<td></td>
<td>3. Activities of Commune Forestry Unit are not clear, as no document or report was elaborated</td>
<td>Difficult to collect or not available</td>
<td>Important, as it is needed to find out the role and influences of this unit toward forest management</td>
</tr>
<tr>
<td></td>
<td>4. Lack of progress description, detailed assessment of projects</td>
<td>Difficult to collect or not available</td>
<td>Important</td>
</tr>
</tbody>
</table>
### Relevant bodies/communities

1. There are different approaches in different areas to involve farmers' participation in forest management of forest enterprises, and no document is available describing these approaches and differences among them. Field surveys are needed. **Important**, as it helps to identify which approach is suitable and effective.

2. Lack of documents describing levels and forms of farmers' and communities participation in forest land/resources management related to:
   - national parks, special use forests, buffer zones
   - forest enterprises (all government organisations)
   - national parks
   - special use forests
   - buffer zones
   - Forest surveys are needed. **Important**, as it helps to identify which approach is suitable and effective.

3. Lack of documents on levels of changes in attitude, culture, production, community management of communities in Central Highlands. **Difficult to collect, study is needed**. **Important**, as it reflects changes in managing role of communities.

4. Though some points were addressed about social vision of communities, however lack of documents studying systems of land management and usage, similarity and difference among ethnic groups. Study is needed. **Important**.

5. There is very little information available on uncontrolled migrants:
   - number of households
   - locations
   - land use systems
   - main products
   - It is needed to organise surveys, statistical study. **Important**, as it has impacts on community forest management.

6. Forestry extension is weak at local extension organisations. **Difficult to collect or information is not available**. **Important**.

7. Lack of information on the groups structuring communities. Survey is needed. **Very important**.

8. Lack of information on diversity of languages, cultures, which have impacts on communication, agriculture and forestry extension. Study is needed. **Important**.

### Benefits

1. Where does community management exist at present? Lack of clear information on benefit sharing among members of communities. **It is needed to conduct survey and evaluation**. **Very important in identifying levels of community management**.

2. Farmers understand very little about benefit sources. How do they get benefits from concrete programs? Why? (e.g. from investment programs to farmers living near the forest). **Difficult to collect such information**. **Important**.

3. Lack of information on social influences of the programs. **Difficult to collect or information is not available**. **Important**.

4. Lack of information on programs' influences on environmental aspect. **Difficult to collect or information is not available**. **Important**.
6 IDENTIFY LEVELS OF COMMUNITY FOREST MANAGEMENT IN CENTRAL HIGHLANDS

The point is to elaborate a clear definition of community forest management in Vietnam, as well as its indicators.

Based on the existing information, we refer temporarily to the definition of community forest management given out by SMRP, including 5 indicators dividing into 2 levels: clear community orientation and less community orientation.

- Indicator 1: Central Highlands belong to clear community orientation
- Indicator 2: Central Highlands belong to less community orientation
- Indicator 3: Central Highlands belong to clear community orientation
- Indicator 4: Central Highlands belong to less community orientation. Only in some places, the project is conducting trial forest allocation to communities
- Indicator 5: Central Highlands belong to less community orientation.

With the said situation, Central Highlands can be put in the group of less community orientation. However, with the soon coming implementation of Decree being changed, and with long traditions of communities of Central Highlands in resources management, i.e. management is conducted by clans, village regulations and principles exist, with the role of village elders and village headman… community forest management is potential to develop effectively in Central Highlands.

47 SOLUTIONS AND RECOMMENDATIONS

Based on actual difficulties which forestry sector is facing, Central Highlands provinces found solutions and set out development orientation for forestry sector till 2010. The following solutions are based on the ideas of interview partners and statements from collected reports.

Land use planning and land allocation

The objective is to protect and develop the existing forest base, to use forest resources in a sustainable and effective way. Planning and management of 3 forest types to district and commune levels, especially national parks and nature conservation areas play an important role in promoting potentials and advantages in forest exploitation and usage. Land use planning/land allocation is considered as the first important step in the development process of forestry sector in private and rural development in general. Solving land use and land tenure rights for farmers is the decisive condition for the success of forest protection and management in Central Highlands.

During the past few years, land allocation under 327 program has been conducted in Central Highlands provinces. So far, Decree 02 of the Government is the policy framework for locations to implement land allocation/forest assignment in long term to organisations and individuals. However, to concretise the decree, it is needed to base on actual local situation in developing suitable plans as well as on farmers’ needs and expectations. This is a principle of community forestry development.

It is needed to get make maximum use from community awareness of ethnic groups in
implementing forest land allocation. The strategy of taking farmers as the basis of land allocation process (i.e. with participation of farmers) should be implemented, by which ensuring high feasibility of forest protection and development. It is needed to promote the role of traditional village headman, who is the one to organise for households to implement the regulations and agreements signed between forest management units and households, household groups, clans or villages (in the form of full volunteer).

Organisations and individuals receiving allocated bare land and denuded hills will get long term land use certificate, at the same time they have rights for benefits from investment policies, they can receive appropriate supports and are exempted from tax as regulated by the law.

For natural forest and plantation forest where vegetation cover should be protected, organisations and individuals will be responsible for strict protection in accordance with the agreements/contracts with the state on allocated forest.

It is needed to clarify tasks and responsibilities of allocating and receiving parties of forest and forest land. Allocation should be based on the general development plan of the sector and the location, on the other hand, it should be based also on the needs and capacity of the ones who receive allocated land. Changes in land use and forest protection should be controlled.

Those organisations and individuals to receive allocated agricultural and forest land: should follow the agreed articles and regulations. They should conduct business on forest land in a sustainable way, co-operate closely with authorised agencies during forest business and protection.

Re-organisation of the management system of forestry sector

To renovate state forest enterprises, facilitate household economic development in mountainous areas, encourage non-state entrepreneurs to development in integration with state orientation. Identify levels in management of forest and forest land, improve forest management to commune level. State forest enterprises will be the responsible body in the area, with simple indirect input service system for sylviculture, such as projecting for afforestation, seedling supply, agriculture and forestry extension. Forest enterprises will guide and plan for exploitation of households when forest reaches exploitable age. This renovation will improve the situation where SFEs focus only in forest exploitation. By this way, a linkage will be created between local people and SFEs, which facilitates the establishment of a forestry extension network. (Nguyen Quang Ha, Report on situation and development orientation of forestry sector till 2000).

Re-structure management units of national parks, protection forests and special-use forests. This is the form where state budget is relied on to organise and co-operated with local farmers in protection, management of forest, afforestation and provide economic supports for households to ensure a stable living through agro-forestry.

**It is needed to link forestry activities with socio-economic development goals.** Special attention should be paid to facilitation ethnic groups to practice fixed cultivation and sedentarisation. To develop home garden and forest garden models, develop household economy in goods oriented way. Provincial authorities should have special policies to support ethnic minorities through funds of hunger eradication/poverty alleviation, or privilege credits to develop agriculture and forestry production. To step by step solve food shortage problem for ethnic groups in remote areas.

To promote indigenous knowledge in management and sustainable development of forest
resources, get maximum use from donation funds of government organisations, non-government organisations, national and international development projects. Facilitate traditional methods in watershed resource management and conservation of ethnic groups in mountainous areas, encouraging the advantages of traditional regulations in community forest management.

**Organise for implementation of state 5 million ha afforestation program**

To mobilise every possible funds, involve every economic components in afforestation. The short-term objective is to protect the existing forest, conduct oriented regeneration and forest enrichment. Gradually regreen bare land by suitable species, with the priority given to indigenous species. Research and select suitable species for each area, apply advanced technologies in seedling preparation and processing works. Market should be taken into account to put forward appropriate marketing strategies to develop forestry activities in Central Highlands.

To improve farmers’ living is the most effective method to protect and develop forest, especially living conditions of local communities. To help them stabilise their living, create employment, generate incomes through introducing new crop species, changing economic structure, improving land use effectiveness, creating new jobs, by that reducing pressure on forest resources. Supports to improve infrastructure (transportation, power, water supply) are needed to provide social equality to Central Highlands. (Report on situation of natural resources and environment in Dak Lak).

Proper investments should be put to compile long term experiences of farmers and to improve scientific and technical skills. To have appropriate policies towards good and experienced farmers. Facilitate scientific research in regional centres, link research and experiments with production practice.

Pay regular and proper attention to develop local human resource. Improve management capacity of local communities through short- and long-term training, as they are the key persons in forest protection and agro-forestry extension.

**CONCLUSIONS**

Having reviewed collected literature, analysed documents related to forestry development in Central Highlands, some issues on community forestry management in Central Highlands could be put forward for discussion:

- So far, there have been renovated policies in forest management, of which orientation to community-based forest protection/development is an important premise for carrying out community forest management in each location.
- Community organisations in forest management system should be classified according to communities: Kinh communities and ethnic minority communities.

Suitable form for Kinh communities is forest management based on households and villages

For ethnic minority communities with high sense of community and clan, forest management should be based on village or clan. Traditional boundaries should be taken into account in forest and forest land planning for community.

It is more complicated for communities with various ethnic groups: Kinh, indigenous and other migrated ethnic groups. Forest management should be in the form of administrative
management, besides forest should be allocated to groups of households, clan or ethnic groups...

- **Transit from state management to community forest management?**

  If focus is only put to internal benefits of communities from forest management, higher needs of the country, e.g. protection, conservation of natural resources… will not be satisfied. This is the point that should be taken account while referring to participation in land use planning.

  It is needed to classify 3 forest types that are strategic at national level:

  - **Special use forest:** under state management for conservation and national development
    - This type should be planned into critical, less critical and secure protection areas. Critical areas should be under state management; less critical and secure areas can be allocated to community for management with limited intervention in accordance with technical guidance of specialised agencies. It is needed to keep in mind that the ratio of bare land in protected areas is very high, therefore, it is needed to have a strategy to allocate land for afforestation, agro-forestry by households, clans and communities.

  - **Protection forest:** joint forest management between communities and state agencies. This type should be planned into critical, less critical and secure protection areas. Critical areas should be under state management; less critical and secure areas can be allocated to community for management with limited intervention in accordance with technical guidance of specialised agencies. It is needed to keep in mind that the ratio of bare land in protected areas is very high, therefore, it is needed to have a strategy to allocate land for afforestation, agro-forestry by households, clans and communities.

  - **Production forest:** transfer forest management to communities or joint management (communities and forest enterprises); forest enterprises are responsible for technical guidance and monitoring the exploitation, products processing and consuming.

- **Benefits of communities, households in receiving allocated land**

  It is needed to clarify benefits of communities, households in receiving allocated land as well as taxes...

  - The existing method of forest assignment (VND 50,000 per ha per year) does not encourage farmers to participate in forest protection, at the same time it is difficult for the state to make payment

  - Forest growth: this is a rather complicated indicator, depending on forest situation, site conditions and crop species. The value of forest products not only depends on productivity but also on species. Whereas the species in natural forest are very complicated. Besides, local farmers are not familiar with this calculation method, therefore they are confused in their income capacity.

  - Based on forest nourishing duration to identify the rate of sharing between farmers and the state (for example, Dak Lak is conducting trial program). But the farmers are still not clear about how many logs and which specie they can get upon exploitation. Therefore, it is needed to conduct survey on the exact quantity of trees, stock, species… which can be exploited in exploitation age.

  In general, it is necessary to discuss and agree with communities on product sharing methods in order to facilitate forest protection/management.

Central Highlands has big potentials in agriculture and forestry development, at the same time it is an important location for national defence and environment protection. However, during the past few years, forest resources in Central Highlands have been degrading rapidly. Forest management
system is facing a lot of problems, particularly community-based forest management has not been addressed properly. Therefore, the transfer from traditional forestry to social forestry, community forestry is an objective requirement. Participation of local communities in forestry activities, including in elaborating development plans, should be promoted.

Benefit relations between forest and forest managers and farmers are being solved through land allocation/forest assignment policies. Participatory approaches in forest protection and development are widely disseminated and implemented in various development projects.

The solutions and recommendations put forward by us are all based on the reports on forestry development and plans of provinces till 2010. Some specialised reports were included in compilation and analysis of practical situation of forestry sector and its development trends in Central Highlands. Due to the limits in time, we could not manage to discuss with individual and private organisations related in data collection process. Therefore, this report is only the general information collection and analysis. We hope to conduct research and survey deeper and in more details about community forestry in Central Highlands.
### Table 6. List of documents collected in the 4 provinces of Central Highlands

<table>
<thead>
<tr>
<th>#</th>
<th>Document</th>
<th>Author / Publishing Organisation</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Main features of changes in forest resources of Central Highlands</td>
<td>Le Sau, Pham Duc Lan</td>
<td>FIFI, Thanh Tri, Hanoi</td>
</tr>
<tr>
<td>2.</td>
<td>Plan for land allocation/forest assignment linked with fixed cultivation and sedentarisation in Kontum Province</td>
<td>People’s Committee of Kontum province</td>
<td>Kon Tum town</td>
</tr>
<tr>
<td>3.</td>
<td>Development orientation of rural upland areas in Lam Dong province</td>
<td>DARD of Lam Dong province</td>
<td>Da Lat, Lam Dong</td>
</tr>
<tr>
<td>4.</td>
<td>Report on the results of planting Black Cassia in agro-forestry model in Loc Phu commune, Bam Lam district in 1998</td>
<td>DARD of Lam Dong province</td>
<td>Da Lat, Lam Dong</td>
</tr>
<tr>
<td>5.</td>
<td>Report on Social Forestry in Gia Lai</td>
<td>Do Doan Trieu, Tran Van Con</td>
<td>Gia Lai Centre of Tropical Forestry, Vietnam Forestry Science Institute</td>
</tr>
<tr>
<td>6.</td>
<td>Summary report of 3-year (1995-1997) implementation of Instruction 25 of provincial standing committee and Decree 02 of the provincial People’s Council on investment development for 27 ethnic communes - Tasks and Solutions</td>
<td>Mountainous Ethnic Committee, Lam Dong province</td>
<td>Hung Vuong, Da Lat, Lam Dong</td>
</tr>
<tr>
<td>7.</td>
<td>Summary report of the project of model Application of Advanced Science and Technology in Improving and Developing Socio-economic conditions for ethnic groups in Mang Yang district, Gia Lai province</td>
<td>Tran Van Con - Centre of Tropical Forestry</td>
<td>Tra Ba, Pleiku, Gia Lai</td>
</tr>
<tr>
<td>8.</td>
<td>Summary report of the project of model Application of Advanced Science and Technology in Improving and Developing Socio-economic conditions for ethnic groups in Mang Yang district</td>
<td>Centre of Tropical Forestry</td>
<td>Tra Ba, Pleiku, Gia Lai</td>
</tr>
<tr>
<td>9.</td>
<td>Summary report 1998, project VIE/96/010, Gia Lai province</td>
<td>Sub-department of Fixed Cultivation and Sedentarisation of Gia Lai province</td>
<td>Pleiku, Gia Lai</td>
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<td></td>
<td>Title</td>
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<tr>
<td>10</td>
<td>Program of community-based resources management - Ka Do project, Don</td>
<td>Faculty of Forestry, Agriculture and Forestry College, Ho Chi Minh City</td>
<td>Thu Duc, HCMC</td>
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<td></td>
<td>Duong, Lam Dong</td>
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<tr>
<td>11</td>
<td>Summary report on agricultural production in 1998 and plan for</td>
<td>DARD of Lam Dong province</td>
<td>Da Lat, Lam Dong</td>
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<td></td>
<td>agriculture sector in 1999 of Lam Dong province</td>
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<tr>
<td>12</td>
<td>Report &quot;Evaluation of existing forest and forest land management as</td>
<td>Dr. Bao Huy, Dr. Bach Van Tuong, Nguyen Van Hoa, M.S. Nguyen Duc Dinh</td>
<td>Tay Nguyen University</td>
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<td>basis to propose methods of forest resources usage in Dak Lak&quot;</td>
<td></td>
<td>Buon Ma Thuot, Dak Lak</td>
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<tr>
<td>13</td>
<td>Report on implementation of 1998 plan</td>
<td>Sub-department of Fixed Cultivation and KTM</td>
<td>Pleiku, Gia Lai</td>
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<tr>
<td>14</td>
<td>Report on implementation of 1998 plan</td>
<td>Forest Protection Sub-department, Lam Dong province</td>
<td>Da Lat, Lam Dong</td>
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<tr>
<td>15</td>
<td>Report on existing status of nature and environment in Dak Lak</td>
<td>Dak Lak People's Committee</td>
<td>Buon Ma Thuot, Dak Lak</td>
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<td></td>
<td>province</td>
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<tr>
<td>16</td>
<td>Report on existing status of nature and environment in Lam Dong</td>
<td>Department of Science, Technology and Environment, Lam Dong province</td>
<td>Lam Dong</td>
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<td></td>
<td>province</td>
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<tr>
<td>17</td>
<td>Report on the status and development direction of forestry sector till</td>
<td>Nguyen Quang Ha, Ministry of Forestry</td>
<td>2 Ngoc Ha, Hanoi</td>
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<tr>
<td></td>
<td>2000</td>
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<tr>
<td>18</td>
<td>Report on the situation of organisation for management of 3 forest</td>
<td>DARD Gia Lai</td>
<td>Pleiku, Gia Lai</td>
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<tr>
<td></td>
<td>types and implementation of forest assignment under 327 program</td>
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<tr>
<td>19</td>
<td>Report on the implementation of closing natural forests in Gia Lai</td>
<td>DARD Gia Lai</td>
<td>Pleiku, Gia Lai</td>
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<tr>
<td></td>
<td>province</td>
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<tr>
<td>20</td>
<td>Forestry development plan of Kontum province</td>
<td>DARD Kon Tum</td>
<td>Kontum town, Kontum province</td>
</tr>
<tr>
<td>No.</td>
<td>Project Description</td>
<td>Main Implementing Party/Contact Information</td>
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<tr>
<td>21.</td>
<td>Plan of sustainable agriculture development - reasonable usage of water and land</td>
<td>Phan Muu Binh, Phan Qua, Nguyen Van Xuan,</td>
<td>47 Nguyen Tat thanh, Buon Ma Thuot, Dak Lak</td>
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<td></td>
<td>resources as basis for sustainable agriculture development in Dak Lak</td>
<td>Truong Dinh Tuyen</td>
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<tr>
<td>22.</td>
<td>Instruction of the provincial standing committee on further socio-economic</td>
<td>Lam Dong PC</td>
<td>Da Lat, Lam Dong</td>
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<td></td>
<td>development of ethnic areas</td>
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<td>23.</td>
<td>Instruction of Lam Dong PC on the implementation of afforestation project and</td>
<td>Lam Dong PC</td>
<td>Da Lat, Lam Dong</td>
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<td>Department for Forestry Development 2 Ngoc Ha, hanoi</td>
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<td>VNMC, Fishery Centre III project office in Buon Ma Thuot, Dak Lak</td>
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<td>Dak lak Committee of Ethnic and Mountainous Areas Buon Ma Thuot, Dak Lak</td>
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<td>development of forest garden model, comprehensive economic development</td>
<td>Nguyen Huy Tuong, 7 Hung Vuong, Da Lat</td>
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<td>2.</td>
<td>Community-based Management of Upland Resources. Funded by Canadian Government. Implemented in Kado commune, Don Duong district, Lam Dong</td>
<td>community development, resource protection</td>
<td>Hoang Huu Cai, Agriculture and Forestry College HCMC - Tel: 08 8963352; Fax 08 8960713</td>
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<td>3.</td>
<td>Biodiversity conservation and Rural Development - Nam Cat Tien Nature Reserve (World Bank project)</td>
<td>forest protection and rural development</td>
<td>Dang Phi Hanh, 3 Nguyen Viet Xuan, Da Lat; Tel 063 831861; Fax 063 828630</td>
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<td><strong>Gia Lai Province</strong></td>
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<td>4.</td>
<td>Capacity strengthening for development of policies for ethnic minorities (in Gia Lai province)</td>
<td>training in organisation for ethnic minority communities in order to enhance capacity of local communities</td>
<td>Nguyen Quoc Minh, Fixed Cultivation and Sedentarisation in Ethnic Mountainous Areas Unit, Pleiku, Gia Lai. Tel 059 824104; Fax 059 827235</td>
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<td>5.</td>
<td>Forestry Sector project and Management of Watershed Protection Forest (Asian Development Bank); implemented in watershed of Ba river in Gia Lai and Phu Yen provinces</td>
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<td>Le Thanh Hoanh, Forest Protection of Gia lai</td>
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<td>Nguyen Vi Ha, Pleiku, Gia Lai; Tel 059 823216</td>
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<td>Lai Duc Hieu, Management Unit of Chu Mom Ray Nature Reserve, Sa Thay, Kon Tum; Tel 060 821189</td>
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<td>8.</td>
<td>Capacity strengthening for development of policies for ethnic minorities (in Dak Lak)</td>
<td>training in organisation for ethnic minority communities in order to enhance</td>
<td>Mauvist Servaas, Mr. Minh, 24 Phan Chu Trinh, Buon Ma Thuot, Dak Lak; Tel 050 858197; email:</td>
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| **9.** | Sustainable Management of Resources in the Lower Mekong Basin (MRC-GTZ) | capacity of local communities  
participatory land use planning, land allocation, development of agro-forestry models, community based resources management | Hans Helmrich, 1 Nguyen Khac Hieu, Hanoi; Tel 04 8294884/5/6 |
| **10.** | VINACAFE (GTZ) | intensive coffee cultivation, community development | M. Landolt, Hoa thang, Buon Ma Thuot, Dak lak; Tel 050 862471; Fax 050 862360 |
| **11.** | Supports to Water Resource Management (DANIDA) | comprehensive rural development, credit, agriculture extension, irrigation | Phillip Riddel, 47 Nguyen Tat Thanh, Buon Ma Thuot, Dak lak; Tel 050 856764; Fax 050 852704; email: swrm@netnam.org.vn |
| **12.** | Forest protection and rural development project (WB), Dak Lak component | forest protection, rural development | Trinh Xuan Sau, 47 Nguyen Tat Thanh, Buon Ma Thuot, Dak lak; Tel 050 810220 |
| **13.** | Supports to Social Forestry (funded by Swiss Government, Helvetas) | human resource development, training in social forestry, community access, information exchange in social forestry, community forestry | Dr. Bao Huy, Tay Nguyen University, Dak Lak; Te/Fax 050 857409; email: sfsp.tn@dng.vnn.vn |
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<th>Agency / Organisation</th>
<th>Address</th>
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<td>Hua Vinh Tung, director</td>
<td>Sylviculture Study Centre - Lam Dong</td>
<td>9 Hung Vuong, Da Lat, Lam Dong</td>
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<td>2.</td>
<td>Mr. Buu, head of forest protection and management unit</td>
<td>Forest Protection of Lam Dong province</td>
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<td>3.</td>
<td>Nguyen Van Tu, director</td>
<td>Agriculture Extension Centre of Lam Dong</td>
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<td>Forestry Unit - DARD Lam Dong</td>
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<td>Unit of Ethnic and Mountainous Areas</td>
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<td>Forestry unit - DARD Gia Lai</td>
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<td>Nguyen Quoc Minh</td>
<td>Dept. for Fixed Cultivation and Sedentarisation of Gia Lai</td>
<td>Pleiku, Gia Lai; Tel 824101; Fax 827135</td>
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<td>9.</td>
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<td>Forest Protection of Gia Lai</td>
<td>Pleiku, Gia Lai</td>
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<td>Mr. Tien, head</td>
<td>Afforestation Management Unit, Gia Lai</td>
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<td>Nguyen Danh, deputy director</td>
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<td>Nguyen Van Xuan, deputy director</td>
<td>Sub-Dept. for Forestry Development of Dak Lak province</td>
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