

## Chapter VI

### Socio-Economic Characteristics of Van Tien Village

#### 6.1 Background of the studied commune

##### 6.1.1 Topography

Quang Luu is the semi-mountainous commune, locating in the northwest of Quang Trach District, that is the last district situating in the north of Quang Binh Province. The commune stretches from latitude  $18^{\circ} 47' N$  to  $17^{\circ} 54' N$ , and has border with seven communes of the district- Quang Hop in the north; Quang Chau Quang Tien in the north-east; Quang Hung in the east; Quang Phuong in the south; Quang Lien in the south-west; and Quang Thach in the west. It situates on the hill and low mountain area with the highest peak of 236 meters and the average slop of  $10-12^{\circ}$ . The range of higher mountains run along the two third of its borderline in the west of the commune and slop down in the southeast, creating the watershed with two clearly different biophysical areas- upstream and downstream. The latter is plain area for majority of paddy rice of the whole commune. The commune is administratively divided into three villages- Van Tien locating on the upstream and others, Tam Da and Phu Luu, on the downstream.

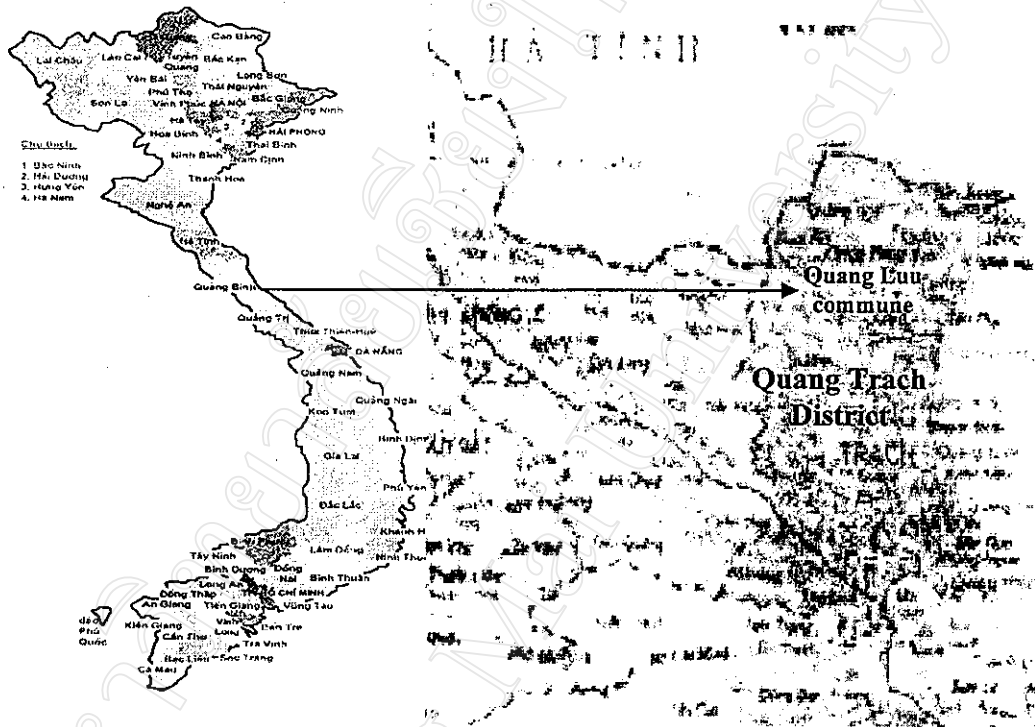


Figure 2. Geographical location of the research area

### 6.1.2 Climate

Belonging to the central Vietnam, the commune is also characterized by the monsoon-tropical climate. There are four precise seasons a year- spring, summer, autumn and winter.

The yearly average temperature is 28-29<sup>0</sup>C. The temperature greatly varies among seasons in year. In the summer, it sometimes shifts up to 40-42<sup>0</sup>C because of being affected by southwest monsoon. On the other hand, in the winter, the average one shifts down to 16-17<sup>0</sup>C; in the time of north-east monsoon wind operating, the

temperature sometime shifts down to 9<sup>0</sup>C, below the suitable one for plants growing. January is the coldest month.

The total rainfall is 2096 millimeters per year. Rainy season ranges from September to December with its rainfall occupying 70-75% total one of year. October is the month with highest rainfall in the year, there are some days that their rainfall reaches 420 millimeters. The lowest rainfall falls in May and June.

The average speed of wind is 2.5-3.0 meter per a second. The winter has northeast monsoon with speed of 2.5-30 m/s, making the cold and rainy weather. In the summer, the southwest monsoon operates mainly, making the hot and dry one. Yearly, there are on average two to three typhoons crossing the local. Typhoons usually happen in September and October.

The humidity is responsive to monsoon mechanism. The yearly average one is 80-85%. From October to January of next year, the humidity is quite high, but from June to August, there happens to the "drought" of air with humidity of less than 75%, even sometimes shifting down to less than 45%.

The terribly variation of the temperature, rainfall, humidity among seasons in the year creates the severe climate in the local. This, in turn, has much affect on the production activities of the commune, especially cropping production. The uneven distribution of rainfall in year usually causes drought and flood resulting in fault of yield of the crops. The drought usually occurs in May or June when the rice is repairing for flowering, so that it can make rice yield destructive unless the irrigation system is good enough.

### **6.1.3 Soil and land use**

The soil here falls under some types. Red-yellow soil is formed from acid rocks and lowly fertile, with the total area is 3311 ha (85 % of the whole). It distributes in the area of over 10<sup>0</sup> slopes, mainly in Van tien village. This soil is more suitable for

trees and perennial plants. The part of this soil currently is used for crops such as sugarcane, cassava, sesame, etc. Sandy soil distributes mainly in Phu Luu village, with area of 156.25 ha (4 %) has been used for crops such as sweet potato, peanut, and vegetable. Sandy-clay soil distributes in downstream area, with 361 ha (9 %), used for rice cultivation of the commune. In term of land use, the land of the commune can be classified as follows.

Table 6. Land classification in term of land use

Categories	Area (ha)	Percentage	Area per capita (ha)
Agricultural land	546.11	<u>14</u>	0.09
Paddy field	336.18	8.6	0.05
Other annually crop	108.75	2.7	0.02
Home garden	69	1.7	0.01
Perennial plant	31.48	0.8	0.005
Water surface	0.7	<u>0.08</u>	0.0001
Forestry land	2096.9	<u>54</u>	0.3
Natural forest	1,537.7	39	0.24
Plantation forest	559.2	14	0.9
Special use land	117.23	<u>3</u>	0.02
Residential land	25.22	<u>0.6</u>	0.004
Unused land	1,111.54	<u>28.5</u>	0.17
<b>Total</b>	<b>3,897</b>	<b>100</b>	<b>1.8</b>

Source: Statistic book of Quang Trach district of year 2000

#### 6.1.4 Population

The total population is 1,300 households with 6,386 people, including 3,139 male and 3,247 female. All of them belong to Kinh (Viet) people group. The population who is in working age is 3,121 people.

Table 7. Distribution of population among villages

Villages	No. of household	No. of people	No. of labors
Van Tien	565	2,389	994
Phu Luu	495	2,200	994
Tam Da	377	1,797	823
Total	1,437	6,386	2,680

Source: Commune office

The rate of natural growth population is 1.5 percent (Hong, 2002). This rate results from natural birth and death rate rather than immigration or migration rate that can make the village communities a distortion.

#### 6.1.5 Economic conditions

The whole commune has 10.4 percent of wealthy households, 63.3 percent of moderate ones and 26.3 percent of poor ones (Hai, 2002). In classification on main job, 1,345 households (94 percent) are agricultural; 4 households (0.3 percent) are forestry; the rest is other jobs (Khang, 2000). The total household economic of the whole commune principally depends on agriculture, which is important as basis economy. 90 percent of income of the population comes from agriculture sector; 5 percent from forestry sector; and 5 percent from other sources (Thoai, 2001).

In agriculture, the main crop of the local is rice. Rice cultivation makes a security of people' livelihood. The productivity of rice in the year 2000 reached 4.4 tones per ha, ranking the third among 33 communes of the district. One important factor decisively affecting it is the water. The good irrigation system allows for application of advanced technologies in paddy field. Other crops include corn, cassava, sweet potato, groundnut, sesame, etc. Home garden also considerably contributes to household income. Pepper is the principle plant in home garden. In 2001, with the price from 20000 to 25000 VND per kg, there were many households who earned from 3 to 5 million VND from their home garden. Besides cropping, livestock also

develops. Compared with the year of 1996, the animal herd of the commune in the year of 2000 increased by 320 heads.

In forestry, the collected products from forest are mainly used for consumption. These include fuelwood, food for daily dietary needs, tree leaves for green manure, and so on. It is difficult to quantify economic contribution of the forest to household income. In the recent years, there are some programs and projects to green barren hill, funded by the government and some foreign organizations in the commune. These considerably contribute to employment and income to people.

In addition, some handicraft careers, such as making leaf-hat, one brick and tile manufactures, and other services have created considerable income for the commune economy and supply employment for households during the time without crops. In the commune, the agricultural laborers have tended to be decreased. In the year of 1996, this kind of labor account for 95 percent of the whole population but in the year of 2000, it decreased to 91 percent (Khang, 2000). It means that the number of laborers who engage in non-agriculture tend to be increased. The majority of this force includes those who leave the local for permanent jobs in the city.

## **6.2 Socio-economic characteristics of Van Tien village community**

Van Tien is one of three villages of the commune, locating on the upstream area. The forest area of the village occupies more than 80 percent of the whole forest area of the commune. The village is also the cradle where the forest management by the community was born. These are the reasons why the study just is limited to this village.

### **6.2.1 The number of users**

Users or appropriators are all those who have equal right to access to the forest recognized by the village community or the local institution on forest management. Different from western society – the individual is considered as a central and

complete unit - in Vietnam society the individual is not a complete unit but a entity in relationship with other objects, firstly with the family, which also is popularly the household. And the lowest individual unit of decision-making is the household (Doan, 1996). Therefore, the users considered in analyzing are households living in the village community.

The first characteristic of users related to their needs for forest resources is considered as household size and labor.

Table 8. Household size and labor (person)

Variables	Mean	SD
Household size		
Total	5.2	1.4
Male	2.8	1.1
Female	2.4	1.1
Family Labor		
Total	3.3	1.7
Main labor	2.0	0.8
Second labor	1.4	1.6

Source: Survey, 2002

The average of household labor (3.3) is quite smaller than that of household size (5.5). This implies that there are many households who have the members living on others' labor. This can encourage these households to exploit forest resources for additional income if their total income is not enough for their expenditure.

Size and homogeneity of the community itself affect much on managing the commons, particularly process of decision-making, collective action, effectiveness of rules enforcing, and so on. According to previous studies (eg: the National Research Council USA, 1986; Wade, 1988; Ostrom, 1990) it was hypothesized that a small

number of users was likely to form and maintain the collective action organization in managing the common property resource. Feeny (1992) states that “if a group is smaller, all other things being equal, it should be less costly for members of the group to reorganize each other and so easier for the group to detect infraction of rules by members and entry into the commons by non-group users”. In addition, the cost of decision-making and coordination of activities could similarly be related to group size. However, none of these scholars indicate exactly the member of users in the small group. Moreover, the small group was rather qualitatively defined in terms of noticeability among member within the group (Wade, 1998). On the other hand, Thompson (1977) and Agrawal (1992) state that small size group may be unable to defend their resources in the face of strong external threats, or be unable to manage resources if they are spread over large area.

For the large and widespread forest resource that borders with many other communities as mentioned in the previous section, it is true that if the community is not large enough it is difficult to protect their forest. The reasons for that are that the notability of users to others' behavior is limited and it is difficult for the eligible users to resist to threat from communities outside, which is presently considered the biggest one. The village community can be considered quite big in comparison with traditionally popular size of village in Vietnam. However, it has features that help to organize managing its common forest well. Being born before the 12<sup>th</sup> century, as many other rural villages, the village has experienced the long time period in which it had its own common rules or convention to govern as an autonomous community. Moreover, it has had no immigration from other locals. Therefore it is quite homogeneous in term of culture, kinship as well as custom. In addition, the distribution of its population is concentrated. These have made the village be relatively easy to reach arrangements and consensus. As such, the important essence of user community to succeed in managing the commons is not only the number of users or households themselves, but the relationships among users in their territorial and social organization as well as the decision-making arrangements in the use of the forests.



However, the increasing number of users combined with the reciprocal relationship among villagers tending to fade due to the penetration of market economy and the more weakness of customary rules of the village community, makes the village's management of the forests as the commons become difficult. The enforcement of rules, coordinating, and monitoring is less effective and more costly. The simple logic regarding the number of users is that the larger the number of users the smaller the shares in the forest resources. It means that a large group of users compete to assert their rights on a limited resource. In such situation the community needs effective rules to control the rate of use in order to ensure the sustained yield of forest resources and guarantee equal shares among the members of community.

Drastic changes in demographic factors may affect forest resources in terms of share and dependency. The population growth rate, emigration and migration also affect the management of forest resource as common property resources. According to the result of census of the year 2002, this rate of village is 1.5%, approximately equal to the growth rate of the whole country (1.7%). The immigration of the village is mainly occurred by matrilineal marriage, however, it is inconsiderable. The natural growth of population partly causes the pressure on the forest resources of the village. In contrast, the emigration from the community to the cities, both seasonal and permanent are important in declining pressure on the forest.

There are more of factors of the users that affect the management of forest resource, however, some important ones such as the level of education, income, land size, participation in social affiliation, occupation, will be analyzed in the next section.

### **6.2.2 Land use pattern**

The land area used by households for cultivation can be grouped into three types such as orchard, paddy rice and hill land area. The distribution of land areas for cultivation to households was found as follows.

Table 9. Land holdings for cultivation (ha)

Types of land	Mean	SD
Orchard	0.13	0.08
Paddy rice	0.23	0.09
Hill land	1.12	2.10

Source: Survey, 2002

From the survey, it was found that 100 percent of household interviewed had orchard and paddy rice land. However, just 44 percent of them had hill land. The per capita average paddy rice area of the households surveyed is 0.04 ha, which is smaller than that of the whole commune (0.05 ha). It may be because the village locates in the upstream area of the village.

- **Wet-rice field**

Traditionally, the Vietnam family has been established and evolved in the environment of agricultural economic of wet-rice (Doan, 1996). So the rice is always respected as “security” for the livelihood of the rural families and rice cultivation is indispensable to the rural people. Since a long time, the wet-rice cultivation of the commune in general and of the village in particular has depended much on water from the forest and has been developed together with the development of the irrigation system. The irrigation work of the village was built in 1962. Initially, the dam was just made with wood by common efforts of the villagers themselves. In the year of 1993, thank to support from the government, the work was rebuilt using concrete. The paddy rice land has been allocated to the households to use for the long term of 20 years based on the number of labor. The per labor average area is 450 square meters. The difference in area among households results from that in the number of labor. All households have the red-book claiming their legal rights on the paddy rice land. This, one hand, encourages them to invest for land and to see it as their own domain. On the other hand, it brings about the unsolvable problem that some who are over of working

age still keep the land meanwhile some others who reaches working age have no land and have to share land with their families or rent land from other families.

The wet-rice is cultivated in two seasons, Spring-Winter from December to March and Fall-Summer from April to August. In the Spring-Winter season, the weather is relatively advantageous to cultivation, but in the Fall-Summer, droughts usually occur, which cause crop failure. With the limited water sources, the management of this irrigation system to use the water effectively and the coordination of water between two seasons are important. This task has been done by the water user group initially set by the villagers but controlled by the commune authority, including allocation and distribution of water and maintenance of the system. Annually, in the transition season, before rice growing season, this work is repaired; the dam is technically checked and repaired, and canal is dredged. These collective actions are possible through villagers' contribution of labor and even money. All rice cultivators have to have the duty to pay irrigation fees that are used for repair and maintenance of the irrigation system, and allowances for the management board and forest protectors.

Even though some machines as such tractors and ploughs have been applied to production practice, the rice cultivation has still maintained good tradition of mutual help of the villagers. The rice cultivation is seasonal in manner, so that there are some jobs, such as seed broadcasting, transplanting and harvesting that need pooled labor in a short time. Most households cannot satisfy this requirement. However, the reciprocity labor exchanges for these jobs help the villagers to overcome this problem. Moreover it also makes the relationship among villagers closer.

In recent years, the rice yield has steadily increased. In the year of 2000, the average yield reaches 4.4 tons per ha. The factors contributing to high yield include soil quality, sufficient water, variety of rice and fertilizer in which water is considered most important. Vietnamese farmers have the saying of "the first is water, the second fertilizer, the third painstaking, the fourth variety". The sufficient water is fundamental element to apply the advanced technology and high productivity varieties in the field to improve the productivity. Appreciating the role of rice for their

livelihood, the villagers respect water sources. This in turn is the motivation for them to protect their forest resources. Moreover, the improvement of soil fertility can be undertaken on an individual basis by investing more fertilizer but assurance of sufficient water for rice fields needs collective action in maintaining the flow of water from the headwaters. This is as motivation for the formation of community-based forest management.

Besides two rice seasons, the rest of time in a year (in the rainy season), much of paddy field where the water is uncontrollable has been left empty. The villagers take of the empty land by raising ducks. In some land where water is available, after harvesting fall-summer rice, second crops such as wet potato, peanut and vegetables, can be cropped. These activities give additional income for households. The improvement of rice yield is important for these farmers to relieve the pressure of meeting their household consumption rather than to generate cash income.

- **Upland cropping**

The limited area of paddy field of the village and its growing population forces some peasants to turn to rainfed cultivation in the less fertile uplands. This has been one of core causes that made the forest rapidly degraded. Having upland, unlike paddy field, was constrained by available labor, cash investment of the household. Most upland areas for cultivation was occupied before 1990s and kept until now by some households who were wealthier and had larger labor force. There are some households who occupied more than 5 ha. There has been still this type of land but it has all been forbidden to exploit, some kept for regeneration and some newly planted. Previously this land was extensively used for some crops such as cassava, sesame, and groundnut and some left unused. Until now, the government has not yet recognized the legal right of households on this land, this is, households have not yet had any certificates on it. However, in recent years, the government has had initiatives to encourage these “owners” to apply agroforestry practice for long term objective. Although there has had somewhat transformation in cropping pattern, the household still pay much attention in short term objective, growing crops that can give income as

soon as possible. Last year some part of this land was turned to intensify sugarcane that supply the material for the sugarcane manufacture just built in the district. It is estimated that it would bring the great total return of up to 150 millions VND per household to some households. Is this true that the households have still hesitated to invest in their own land on which their right is insecure? With present population pressure, it is sure that every household needs a little upland as an alternative for extra income or low opportunity cost of labor for people who have no alternative local employment whist the paddy field is not enough as they need to feed their families. Therefore, whether households accept the situation where most upland belongs to some households as present? This requests a need for proper interaction on this issue that would affect the forest management practice of the village community.

Addition to hill land for cultivation, in the last three years, under the Viet-Germany project on hill greening, about 50 percent of household of the village have been allowed on lease hill land with per household average area of 1.5 ha to plant pine and eucalyptus trees. The plantation has been financially supported by the state government and Germany. All these owners obtained the certificate of rights for their land for the long term of 50 years.

- **Orchard**

Orchard here means home garden. The garden land has been also occupied by households when they have built their houses. Traditionally, the earlier the households built the house, the larger the garden land area that they have because the limited resident land area of the village. However, to date in order to have residential land area, the villagers have to gain permission from the commune authority. The average garden area of the households surveyed is 0.13 ha (SD:0.08). Unlike the upland, the garden land has been legitimately recognized by the government and every household has the certificate of right on their own garden land.

In the village, home garden practice is quite important for household income. Most households have used the garden for agroforestry practice in which the main

crops includes pepper, fruit tree and forestry tree. Pepper is suitable to this soil. It is easy to grow and requires a little labor, so they have been planted popularly in the home-gardens of the village. Being exports, pepper has brought considerable income to households. There are some households whose income from pepper reaches to 4 million VND per year. Fruit trees have been grown mainly for domestic consumption. However, they also made notable cash income for households. Some popularly planted fruit trees include jackfruit, banana, lemon, orange and papaya. Forestry trees have been planted as fences for long-term purpose. In addition, some vegetables have been grown in the garden for daily dietary needs. Home garden practice is convenient for the households as it is nearby home. The villagers can make use of the time when they do not work in the field for garden practice.

In short, orchard and hill land for agroforestry practices partly help to meet household's demand for some forest products, especially fuelwood. People can create some forest products in their own garden and even grow some valuable plants that are vulnerable to extinction. This relieves pressure on forest resources. Paddy rice cultivation is so important to household because it provides dominant food sources to sustain their lives. It also maintains traditionally mutual help in the rural area that makes foundation for collective actions in forest management. Rice cultivation much depends upon water source from forest. This gives the villagers greatest incentive to protect forest, because their means of living will be threatened if the watershed resources further deteriorate.

### **6.2.3 Occupation**

The livelihood of the people in the community are closely related to the land use patterns and more or less depend upon the forest resources. The major occupation of villagers of the community is farming, principally rice cultivation. One hundred percent of respondents overall are involved in wet –rice cultivation as the economic base for their living. Rice cultivation alone, however, is not sufficient to generate income for their living, and in many cases rice yields are barely enough for household consumption. This is the reason that 100 percent farming households from the survey

earn their living from a combination rice and cash-crop cultivation and livestock. In the village, the livestock are very important components of the farms. With the large forest area, the village has advantageous condition for grazing animal as buffalo. Pig, duck and chicken raising can make use of by-products from cropping production, so the cost for its inputs is reduced. Moreover, farmers can use their spare time to work for it. These reasons make it relatively highly economically attractive.

Limited land holdings and the scarcity of forest resources force the villagers to seek second jobs to fill the gap between their actual income from their main occupation and the rising costs of living. From the survey, 67 percent of the respondents have second jobs such as leaf-hat making, wage labor within the local community as well as in the city, and trading in the locality, in which the wage labor brings back greatest income. In the commune, there is tile and brick manufacturing that has established for a long time and presently operates efficiently. It partly helps to absorb the surplus labor force of the village.

The tendency of young men and women to seek jobs in the city has grown in recent years. These second jobs in wage labor, sometimes providing more income than the main occupation, have functioned as a safety valve for the pressure on land and forest resource. In the past, the villagers considered the forest resource as their source of necessities and income after the harvesting season ended. They headed to the forest for everything from which they could make money, ranging from timber, fuelwood, charcoal, vegetables, hunting and varieties of minor forest products. Nowadays, young labor, instead, heads to the city.

The rapid growth of the industrial and service sectors in the past decade has absorbed much of the labor force from the agricultural sector in rural areas. In the village, there are many householders, mainly men, who have gone to the cities to work to earn additional money during the time without crop. The sons and daughters have gone to work as far away as Saigon, in the south of Vietnam. Many of them get permanent jobs and do not return home during the rainy season. They may instead send money to their parents to hire local laborers to do cultivation

In summary, the occupation of the people in the community is mainly rice cultivation, which is largely dependent on water from the forest. Rice cultivators, concerned about degraded forest, influence the invention of the rules to protect the headwaters leading to the formation of community based forest management in the village commune. At the same time, the means of living are diversified by job opportunities in the localities as well as in the cities, which in turn helps to reduce pressure on the forest resources by absorbing surplus labor from the local community.

#### 6.2.4 Income

Household income of the village comes from many sources, which can be divided into three groups such as agriculture, including crop production and livestock, forest resources and off-farm. It was found that the yearly average total household income is 6,303,464 VND (SD: 3,552,590). The rate of income from different sources to total income is defined as follows.

Table 10. Average percentage of household income in the village

Sources	Percent of total income
Agriculture	76.6
Cultivation	36.9
Livestock	39.7
Forest resources	4.6
Off-farm	18.8

Source: Survey, 2002

The crop cultivation provides food for household consumption and also cash in come. The bigger income from cultivation the bigger that from livestock because livestock take inputs from cultivation. The income from the forests products is so small compared with others but quite important to poor households with low total income. Among 70 households surveyed, there are only 23 percent getting cash



income from the forests. The remainder just uses forest products for domestic consumption rather than trading.

Practically, it is difficult to calculate the exact income of rural households, especially from survey data, because accurate data depends on the memories of the interviewees. Most of the rural people do not keep records of their income. Moreover there are many items of incomes in kinds such as food from the garden and basic necessities from the forests not included in their income. Therefore the annual income per household in this study may not be comparable with the income from other sources of statistics based on income per capita. The economic value of the forest resources to household is usually unestimated.

Cash income has increasingly become a vital part of the local economy when the market economy penetrated into rural societies, which are inherently self-sufficient economy. In recent years, going with development of market-oriented economy in the whole country, the rural economy also has been step by step marketized. Besides positive affects, it has brought rural people to complex problems in which there is the imbalance between income and expenditure of households because the needs has considerably increased while the production has still slowly developed. Rising costs of living and higher expectation force the local people to manage to earn more cash income to buy goods and services produced form outside the community. The local economy has become more and more dependent on the outside market system. Sources of income have diverged from one crop (rice) to various crops influenced by market demands, and to sectors other than agriculture. Need for cash income more and more increases while the subsistent productions are not able to keep up with it, can lead to illegally exploitation of the forest resource. It is necessary to have the strict rules to limit this matter for sure that the local forests is managed and used sustainably.

### **6.2.5 Education**

In the survey, the educational level was defined accordance with the education system of Vietnam, divided into such different levels as primary school, secondary school, high school and high education. From the survey, it was found that most of respondents reached secondary school (mean 2.18, SD: 0.57) however most of them followed the irregular educating program applied in the war stage. It can be said that the educational level of the village is quite high compared with the whole country (40 percent rural laborers whose education are less than reach secondary school (Doan, 1996). Like other rural areas, one of serious causes that confined the education of the village is war and poverty. Living in the war, the villagers had no sufficient conditions for studying because of bombing and lacking of schools, teaching instruments and teachers as well. After independence came, while these inconveniences had not yet solved, the difficulties in economic life and the situation in which the families had a lot of children, additionally forced the children out of school earlier because parents could not afford to send them to a school. Moreover, at that time, the parents paid more attention in production for survival of their families than education of their children.

However, there has had a drastic change in the level of education of the younger generations, in part because of increasing aspirations, requirements for higher education in the non-agricultural work place, and in another part because of the governmental program of education popularization of primary and secondary school in the rural areas. Many young men and women strive for higher education as a path to escape from poverty and hard agricultural labor in the rural areas.

The change in the level of education of the villagers will affect the degree of dependency on forest resource, in the sense that the people with higher education tend to pursue off-farm employment rather than agricultural based occupations, which depend more directly on healthy forest. In the other hand, the educational level would affect people's ability of knowledge and perception, which in turn affect their behavior on the forest resources.

### 6.2.6 Social affiliation

Accordance with administration system of Vietnam, communes are the lowest administrative unit. Villages are a component to constitute the commune and are responsible to settle all civil problems occurring in daily life of the village through tradition, morality and regulations under law system of the state. In this sense, villages are an autonomous unit but under the control of administration system.

The present administration system of the commune is structured to consist of Communist Party, People's Committee, People's Council, and mass organization complex. The main duty of the Communist Party Base is to see that national policies have been implemented at the local level. The People's Committee is responsible to organize implementing the state tasks at the local level and the people's Council is responsible to oversee this implementation, and mass organizations. The mass organizations include Youth organization, Women's association, Older' association, Veteran's Association, Front organization, Farmer's association, and so on that are the "efficient arm" of the People's committee.

At the village, beside the village management board including the village vice-header and header, and secretary, the mass organizations pay important role as a bridge connecting administration system and population. They are responsible to absorb guidelines, policies, and plans of the state and then to propagate, educate and mobilize villagers to implement them. At the same time, they give feedback from villagers to the commune as well as and higher authorities. In addition, the village has some organized groups such as self-management group of water users and garden interest group.

Social affiliation here is defined as being a member of the mass organizations or organized groups above. From the survey, 66 percent of respondents participated in these groups and most participated as a member and some as a leader; and 14 percent of them did not.

Table 11. Participation of respondents in organized groups

	Case	Percentage
Yes	46	66
No	24	34
Total	70	100

Source: Survey, 2002

Group membership indicates involvement in collective actions or mass movements within the village community. It is an important foundation for the formation and operation of community based forest management.

### 6.2.7 Dependence on forest resource

The livelihood of the local community is dependent on the forest resource in several types of resource use ranging from timber, fuelwood, water source, cultivated land, and minor forest products. The dependency of household on forest resource indicates their importance to them. It was found that the dependency is different for each kind of resources and among households.

Table 12. Dependence of household on forest resources (percentage) in the village

Forest resources	High	Medium	Low	No
Wood	0	11.4	40.0	48.6
Firewood	30	35.7	31.4	2.8
Chestnut fruit	1.4	12.8	41.4	44.3
Hill land	7.1	22.8	17.1	52.9
Water	84.2	8.5	4.2	2.9
Others	7.1	15.7	54.3	22.9

Source: Survey, 2002

The villagers are, however, used to restraining their use of the forest over a long period time. At the same time, the villagers tend to be less dependent on the forest resources by turning to non-resource oriented means of living such as dairy farms, wage labor, and off farm employment. Nonetheless, they continue to cultivate rice for household consumption and food security, and this has maintained their dependence on the forest resource as an indispensable source of water supply.

The dependence of the villagers on the source of water from the forest resource, on the one hand, dictates the viability of local institutions on forest management. The high degree of dependency on forest resources for other resource sectors, on the other hand, can possibly be an imminent pressure on the vulnerable institutional arrangements unless alternatives are available as safety valves.

In short, the dependency on forest resources is the crucial factor influencing the evolution of the community-based forest management, and vital to its sustenance. The forest are subject to multiple uses, thus, different groups of household (wealthy, moderate and poor one) are dependent on the forest in different categories. The degree of dependency on the forest for each item also varies among individual users. However, one category that most of the villagers in the community consider indispensable is the use of the source of water for cultivation. High dependency on the source of water with less dependency on other categories is the perfect situation where the CBFM are likely to develop and last longer.

#### **6.2.8 Demand for forest resource in market**

The increasing demand for forest resources in the market is a signal indicating that the pressure on the forest resource tends to be higher, which easily leads to overexploitation unless there are effectively enforceable and strict rules system. However, market mechanisms are the external arrangements (Oakerson, 1992), which are beyond the control of local institution in the village community.

Demands for certain types of resources from outside the community can be a temptation to exploit the forest at a rate exceeding the capability to sustain yields. In recent years, the demand for fuel-wood and charcoal from outside the community considerably has accelerated. Being not so far from the town (about 5 km) the forest is subject to pressure from large demands for fuel-wood for processing foods for consumption such as bread stoves, slaughterhouses and restaurants in town. The demands for fuelwood of the people living in the communities around has been also so large that the frequency of the local market for fuelwood more increase to 6 times per month compared with 3 times in the last three years. Additionally, the increasing capacity of the tile and brick manufacture in the commune exacerbates using fuelwood as the input.

In the meanwhile, the demand of the villagers for forest resources for cash income partly decrease, instead they seek cash income from other sources such as farming expansion, wage labor, and etc. The needs of the villagers for forest resources for domestic consumption still do not decrease, however it does not make the forests harmful because they can be able to meet that need.

#### **6.2.9 Conflicts in the use of forest resource**

Before 1990, under the state forest enterprise and district administration's management, the "open" forest was open to not only villagers but also non-villagers, including people from neighborhood communes, in term of forest products. However, land was just open to villagers. From the movement of reclaiming forestland to cultivatable land in 1980s, many villagers had cultivated land in the forest. In 1992, the state forest enterprise confiscated much of occupied land to make reforestation with financial supports from Program 327. This makes existing conflicts between villagers and officials of the state forest enterprise much more serious.

Since limitations were put on converting land in 1993 by the commune authority, the owners of occupied forest-land have been allowed to cultivate on it although they have had no certificate from the government while land exploitation has been

forbidden. This has led to the problem that the cultivated land in the forest has belonged to a few households even with too big areas while most households have not had this land. In the situation of increasing population and limited paddy field area, many villagers need hill land for cultivation while some owners leave their hill land fallow because of the lack of labor and investment. From this, the conflicts have occurred among villagers and they are still not yet solved.

Furthermore, there are conflicts between villagers and non-villagers. Firstly conflicts between villagers and so-called eligible users from other two villages of the communes. Since traditional forest management was expanded to the "open" forest, the village has been assigned to organize management of its whole forests. Although the task of forest management was assigned to the village, it has the limited property rights on its forests. The village has had the only right to manage the forests but no exclusive right, which belongs to the government. All people living in the commune are considered eligible users while the only villagers have involved in organizing forest management. This leads to the less effective enforcement of rules concerning the forests on these users, with the result that they very usually commit violation of rules. Second is the serious conflict between the villagers and people outside the commune. These people exploit the forests for fuelwood and charcoal as the means to earn their living. Until now, this conflict has not been solved yet because it may almost exceed the capacity of the local institution.

Besides, there are internal conflicts between the villagers and the protectors who are assigned the enforcers of rules. The villagers, who much depend on the forests for their income, have usually been arrested and punished by the protectors when they illegally exploit the forests. As a result, they have had conflicts among themselves. On the other hand, some protectors for the open forest have abused their power, biased and even taken bribes while doing their task. The villagers have been not pleased with them and of course the conflicts have happened between them.

#### **6.2.10 Leadership skill of the local leaders**

The community-based forest management is a decentralized and devolved approach in which the local people have managerial roles in activities. In such position, the local leaders become decision-makers and rule enforcers so that their leadership skill is very important.

The community-based forest management has used the council the established by the commune authority as the mechanism to manage the local forest resource. The council is the formal organization including the community and official leaders. The community leaders, as representatives of the community, are responsible as both decision-makers and enforcers. The official leaders have the role of decision-makers on legal base. In this sense, they can be considered as the representatives of the state's administration at local level. With such two kinds of leaders in the local institution, the decision making process is the combination of the legislation of the state and settings of the community. The local institution has gained recognition from the government. This help the community to benefit from the government funding for their task, which in turn strengthens its legitimacy to manage the local forests.

The communal manner has been existed for a long time in the rural villages of Vietnam. This directs the way of settling problems occurring in the daily life of the villages. Traditionally, settling these problems has been based not only on rationalities (legitimacy base) but also on feelings. So, one community leader is not only skillful and powerful but also moral- honest and kind (Doan, 196). From the survey, it was found that 76 percent respondents were contented with their leaders and 14 percent were not.

Table 13. Content of respondents with the leaders

	Case	Percentage
Yes	53	76
No	17	14

Source: Survey, 2002



The complaint of the villagers who are not contented with their leaders is that there were some leaders who did not do well their assigned task, e.g., they settled violations of rules unfairly, abused their power, and sometimes took bribery from violators. These behaviors of the leaders affect the vitality of CBFM.

The leaders are supposed to be the representatives of the local community in dealing with state authorities and other external arrangements (Moerman, 1969; Keyes, 1970). In the central planned economy (before 1986), the collective was economic production unit but it practically influences almost cultural and social activities of households. Hence households became a dependent unit on the collective. In that period, the local leaders were so powerful to villagers. Nevertheless, in market-oriented economy, the household becomes a self-planning economic unit, the power and role of local leaders partly declined once their economic power was no longer. At the same time their role as representative of the community has faded since their interests depend on external resource external resources. Local organizations such as the council and village management board have become functionaries of the state.