

Chapter VII

The Contribution of Non-timber Forest Products to the Household Economy

Chapter six described how various NTFPs were collected as well as their role in the daily life of the Tay people in Tat hamlet. Some of these products are directly consumed by the households so constitute non-cash income. Others are collected for sale so contribute to cash income. In both forms, NTFPs make important contributions to the household economy. In this chapter the contribution of NTFPs to the household is looked at in terms of providing both cash and non-cash income. Some factors that may influence the amount of income from NTFPs are also considered in this chapter.

7.1 Contribution of NTFPs to the household economy

7.1.1 NTFPs and cash income

The objectives of collecting NTFPs differ according to both the type of NTFPs and the type of households. Some households are largely dependent upon NTFPs for home consumption and some are more dependent on NTFPs for cash income. The cash income from this source was compared to the total cash income of the households to determine the importance of NTFPs in the cash economy. On the average, NTFPs contribute about 42% to the total cash income. However, this proportion varies among different economic groups of households. It is estimated that NTFPs made up more than 53% of total cash income in poorer group, 46% for the

medium group, and about 33% for the better-off group (Figure 13 or Table 16). From this, it can be concluded that in terms of the households total cash economy, NTFPs play a major role in contributing to the total inputs, particular to the poor, who often have less paddy land and capital to invest in a farming system. The data suggest that the total amount of income from NTFPs among households does not differ very much. The poorer group has smaller total income, so the portion of income from NTFPs represents a greater share of their total income.

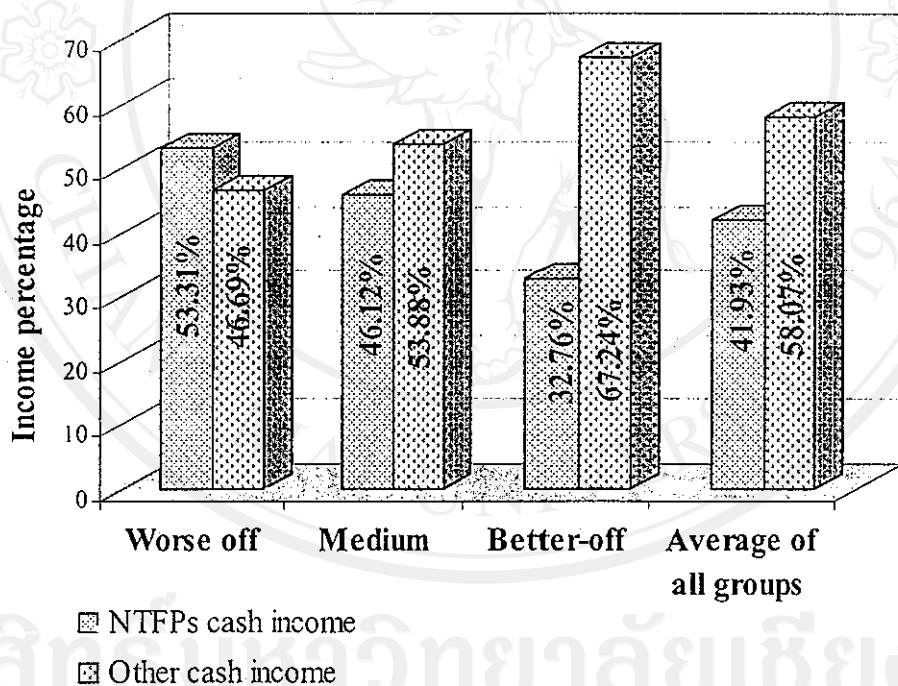


Figure 13: Cash income from NTFPs in comparison to cash income from other sources

Source: Survey, 2002

Table 16: Cash income from NTFPs in comparison to cash income from other sources

	Cash income from	Other cash income
	NTFPs	
----- Thousand VND-----		
Worse-off households	29,808.8	26,109.00
Medium households	35,686.90	41,686.90
Better-off households	34,350.15	70,495.00
Average of all groups	33,281.95	46,096.97

Source: Survey, 2002

7.1.2 NTFPs and non-cash income

As mentioned in many studies, NTFPs are not only important for income generation, but also for subsistence for the local households. Looking at the contribution of NTFPs to the non-cash household economy, it was found that, on the average, NTFPs made up more than 33% of the total non-cash income of the household. Once again, among different economic groups of the households, the collection and use of NTFP are very different. As shown in Figure 14 or Table 17, the proportion of non-cash income for the poor is much higher (50%) compared with the medium (30%) and the better-off (26%). Thus, NTFPs are more important for the poorer group than the other two groups. This can be explained as the poor having fewer productive assets in the form of land capital and financial capital, they have to rely on collecting NTFPs which provide them food as well as income. Among the 60 households interviewed, there was one household with neither paddy nor swidden land. Its daily needs, therefore, were met in total from the forest. This does not mean the forests can provide for the entire population living

in and around the forest, but it indicates that forest is very important in providing the villagers with a “safety net”.

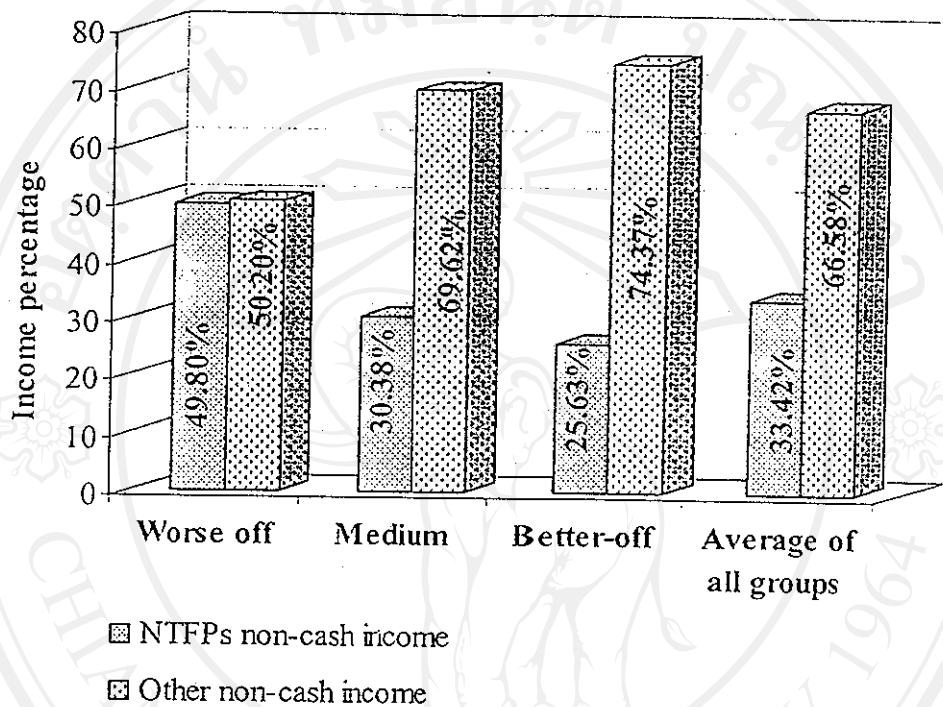


Figure 14: Non-cash income from NTFPs in comparison to non-cash income from other sources

Source: Survey, 2002

Table 17: Non-cash income from NTFPs in comparison to non-cash income from other sources

	Non-cash income from NTFPs	Other non-cash income
	----- Thousand VND-----	
Worse-off households	32,499.39	32,757.80
Medium households	27,756.02	62,222.20
Better-off households	26,287.73	76,259.20
Average of all groups	28,647.75	57,079.73

Source: Survey, 2002

7.2 Factors affecting the utilization of NTFPs

The above part clearly showed that NTFPs are important in contributing cash income and non-cash income to the household's economy. In recent years, however, the income from NTFPs has been decreasing. Respondents to the survey gave different reasons for this decline. Some reported that it is because of the increasing population, so that too many people now collect NTFPs. Some said that, although NTFPs are not available as much as before, they still need to have food or money. Therefore they have to go further into the forest to collect so that they have to spend more time to gain the same returns. This would influence the amount of NTFPs collected and cause a loss in income from NTFPs.

Many others mentioned about the effect of the market on the collection of NTFPs for sale. The collection of NTFPs for sale of the people in Tat hamlet depends on the buyer. For example, NTFPs like *cu ly* and *khuc khac* are only collected when ordered. However, many said that since the road was constructed, more people from the lowlands come to buy NTFPs, so that people can sell their products easily. This increases cash income from NTFPs, but may also lessen the incentives to collect them. Since with a good transport system, the market for agricultural products would be stable. So, if they can produce cash crops or livestock for sale, they might be less involved in collecting NTFPs. Some also mentioned that the seasonal availability of products would also affect their collection. Many people mentioned about the labor availability in the transition period, a period when people do not have to spend much labor in agricultural activities. During this time, people would go to the forest to collect NTFP more frequently.

Logically, people only collected NTFPs when they have free time so the factor that could determine the different in income from NTFPs could be labor availability. But if there is a better opportunity that people can earn for their living higher than extraction forest products or NTFPs, the local people will not involve in NTFPs collection. Since in this study area, beside involve in farming activities, there few other off-farm opportunities for the local to earn for their living so they might have to rely more on the extraction of NTFPs.

Those factors above are the possible factors that directly or indirectly related to the utilization of NTFPs, or the differences in income from NTFPs. However, in this study, I proposed three factors which would more directly influence the amount of income from NTFPs. Those three factors are: Paddy land size, swidden land size, and labor availability. The relationship can be verified by a simple regression model.

$$Y = f(X_i)$$

Where:

Y = Total income from NTFPs

X_1 = Area of paddy land size (m^2)

X_2 = Area of swidden land size (m^2)

X_3 = Labor availability (number of person)

1. Paddy land size (or total paddy land holding) is considered as the most valuable resources in the study area. As it contributes a high income to the household. The purpose of using this variable is to examine whether household whose holding is large would be less involved in exploiting NTFPs from forest.

2. Swidden land size (or total swidden land holding) is also very important in providing additional income to the household. As the paddy land size is limited in this area, so the local people also depend on cultivating the swidden crops in order to meet their food need. Moreover, cultivating swidden crops would also provide an important cash need to the household. So the purpose of using this variable is also to examine whether household with large swidden land area would be less involved in exploiting NTFPs from forest.

3. Labor availability is the number of household member. If the family has more labor, they would need more food and if they do not have other living opportunities they will heavily rely on NTFPs from the forest.

The data analysis shows that only two factors or variables namely size of paddy and swidden land were statistically significant. Thus the estimated regression final is represented by:

$$Y = 8871.19 - 2.5871x_1 - 0.5387x_2$$

$$t \text{ statistic } (0.263) \quad (4.452) \quad (3.378)$$

$$R^2 = 0.69$$

From the model, the relationship between the income from NTFPs and the paddy size is described by $b_1 = -2.587$. From this outcome we learn that for each additional square meter of paddy rice, the incomes share from NTFPs decreases on an average by 2.58%, assuming that the other independent variables in this model are held constant. This indicates that income from NTFPs are influenced by the area of paddy land. The reason leading to this result is due to the high outcome from

cultivating paddy rice, and when people has enough stable provided from cultivating wet rice, they might less involve in collection of NTFPs. As it was presented in Chapter 4 that most of the poor in this area have less paddy land to cultivate. In this situation, we can say that the poor or the landless households have to rely more on the income from NTFPs than the better-off and the average.

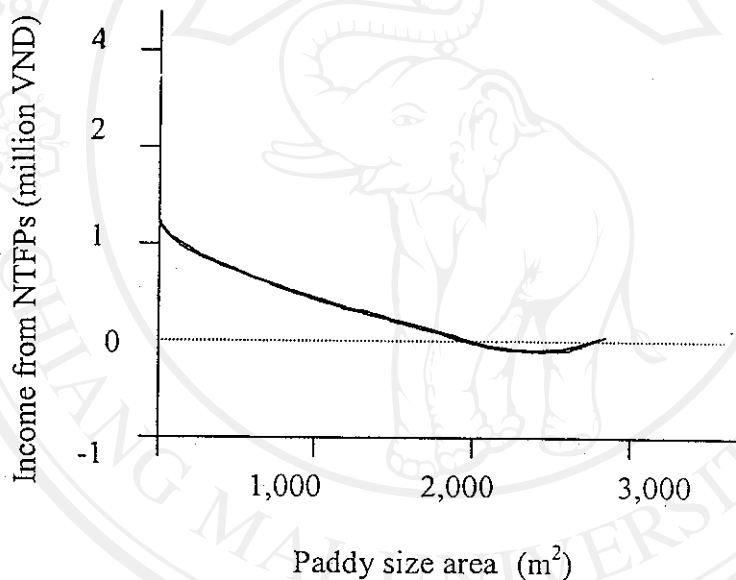


Figure 15: Relationship between income from NTFPs and paddy size

In explaining the relationship between income from NTFPs and the swidden size is described by $b_2 = -0.539$. This is interpreted as for each additional square meter of swidden land size, the average income from NTFPs decreases by 0.539%. This indicates that the area of swidden land affected the income from NTFPs. The reason leading to this consequence is also due to the outcome from cultivating swidden crops are higher the NTFPs. This does not mean that the role of NTFPs in local livelihood is decreased. We say that although people depends more on

agriculture production, NTFPs are still very important in providing medicinal plants, construction materials, agriculture tools, fresh foods and proteins, especially food at times of crop failure.

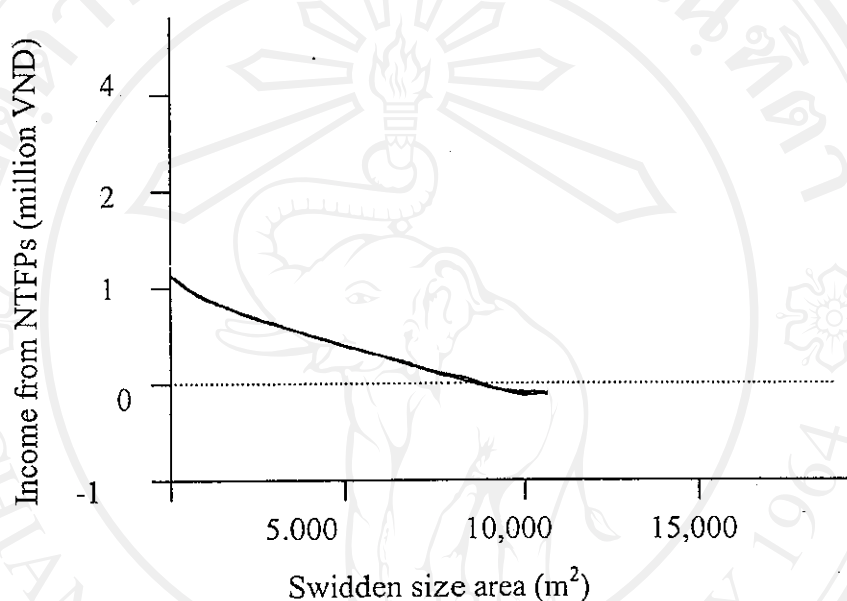


Figure 16: Relationship between income from NTFPs and swidden size

Labor availability is a crucial factor largely contributing to increasing in income from NTFPs. However, the data analysis shows that this variable was non-significant. It was observed that, there are two reasons leading to these consequences. Firstly, because of the larger member of the family, the more they will involve in other activities. For example, cultivating swidden crops and sometimes they are trying to find place to construct a new paddy rice. In some cases, some of the household member go further into the forest to built a temporary house and make a swidden fields. They usually living there in a long period of time to cultivate their swidden crops and only come home when they need salt, rice, ect. to eat. Secondly,

household with more labor they could be able to go for logging. Although, this work is illegal but in turn they could get a high income.

Table 18 indicates that the average income from NTFPs was 3,084.16 million VND that ranged from 238 thousand VND to 12,522 million VND implying that the income from NTFPs are highly different among the households in the study area. The different among the households in holding paddy land size and swidden land size also very large, from 0 to 9,800 m² and from 0 to 2500m², respectively.

The analysis shows that R² is 0.69, this indicates that 69 percent of the total income from NTFPs are decided by the area of paddy land and swidden land and 31 percent is decided by other factors. As mentioned above, the collection of NTFPs for sale in this area depends on the market, therefore, market is the possible factor influencing NTFPs collection or income from NTFPs. However, due to a limited time we could not include this factor into the model.

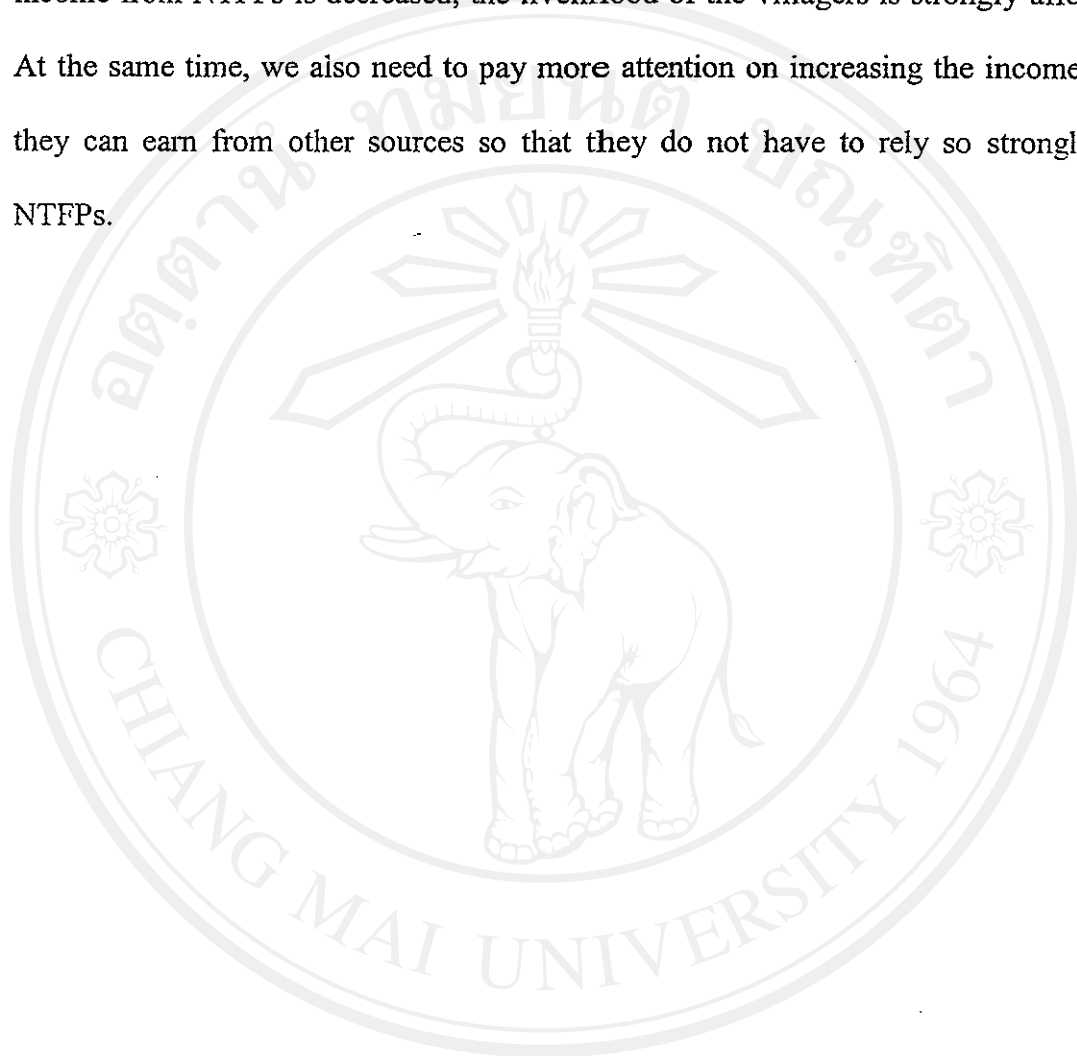
Table 18: Descriptive statistics for incomes from NTFPs and variables affecting the incomes NTFPs (thousand VND)

Variable	Mean	SD	Min	Max	Obs.
Income from NTFPs	3,084.16	3,125.79	238.38	12,522.00	60
Paddy land size	968.00	600.11	0.00	2,500.00	60
Swidden land size	5,706.66	2,056.31	0.00	9,800.00	60
Number of labor	3.66	1.36	1.00	7.00	60

Source: Survey, 2002

It can be concluded that greater attention must be paid to the access to agricultural land because the smaller the farm size, the greater the reliance will be on

forest products. The result will be the overexploitation of forest products. And when income from NTFPs is decreased, the livelihood of the villagers is strongly affected. At the same time, we also need to pay more attention on increasing the income that they can earn from other sources so that they do not have to rely so strongly on NTFPs.



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