

**An Analysis of the Livelihoods
in Selected Villages around the BD – NB National Park
with a Particular Emphasis on Establishing the
Opportunities for Community Based - Tourism Enterprises**

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**On behalf of the team
Le Quang Thong**

I. INTRODUCTION

1.1 Problems Statement

Developing effective collaborative management activities often requires stakeholders to change the activities that threatening or damaging the resources in projected areas or its bio-diversity. This change should be possible and beneficial at both household and community levels. In order to design appropriate scheme of effective collaborative management, it needs to analyze the socio-economic situation of local people as well as the activities of relevant institution involved in the collective management. Hence, the purposes of this study are to identify and measure sources of household's income in selected villages belonged to Dachais and Lat communes, around the BD – NB National Park, Lam Dong Province. Through the analysis of people livelihood, potential and constraints of development, the study helps to find out appropriate solutions. Among the alternation, eco-tourism is considered and evaluated its feasibility to local communities.

1.2 The Specific Objectives

The specific objectives of this study are as follows:

- To overview socio-economic situation of people in Dachais and Lat communes;
- To understand the situation of land-use and land-use change with specific reference to forest coffee;
- To determine the sources of income to households and potential as well constraints related to household's income and to community's livelihoods, evaluate opportunities and constraints of local community, especially the possible impacts of eco-tourism development; and
- To suggest solutions for sustainable livelihood.

II. METHODOLOGY

This paper presents the livelihood in selected villages belonged to Dachais and Lat communes, and findings related to opportunities for livelihood improvement while

protecting the natural resources which have been managed by relevant institutions. The report summarizes primary data collected during household surveys in two communes, together with secondary data supplied by local authorities. Aside from statistical analysis of, selected PRA's tools are also applied. The analysis was performed by a team including an economist and a sociologist and took place between September 6 and 14, 2008. The study team reviewed documents, and organized several meetings with the local authorities, community's leaders, representatives of households and other relevant people in Dachais Commune and Lat Commune, Lac Duong District, Lam Dong Province. Additionally, the analysis team made field visit to areas in Bidup-Nuiba National Park to understand the needs and possibility of community-based eco- tourism development. Through PRA meetings organized with local government authorities and local communities, the team also identifies both advantages and constraints to people livelihood, and to the potential of eco-tourism.

Distribution of sample households and PRA meetings are presented on Table 1

Table 1. Distribution of samples, Dachais and Lat communes, 2008

Commune	Individual survey (n=40)		PRA
Dachais	Đon K Si	23	n=25
	TuPoh	11	
	Klong Klanh	6	
	Sub-total	40	
Lat	Bonner B	20	n=36
	Bonner C	12	
	Đann kia	22	
	Đan Gia Đit B	6	
	Sub-total	60	
Overall		100	61

III. FINDINGS AND ANALYSIS

3.1 Socio-economic Situation of Study Area

3.1.1 Age of sample farmers: Average age of household head was about 37 years old. About 50% of respondents had age between 31 to 45 years old and 30% were younger than 30 years old.

3.1.2. Education: In overall the head of household in study areas had an average of 7.4 years at school. But average schooling levels were significantly different between two sites. It was 3.2 and 10.4 for heads of households in Dachais and Lat, respectively. Most of household heads in Dachais Commune had primary school and early grade of high school. But in Lat Commune, 60% of respondents could reach high school level. This is a very positive point compared to other ethnic communities in Tay Nguyen region.

Table 2. Schooling level of respondents in Dachais and Lat Commune
Unit= years at school

Commune	Average schooling level
Dachais	3.2
Lat	10.4
Overall	7.4

Source: Households survey, Dachais and Lat communes, 2008

3.1.3 Household size: Number of people per household means that the family might have advantage in farming, in terms of labor source. However, on the other hand, it also presented the pressure on demand for food and other expenditure. It was 90% of sample households having more than 3 people. On average, it was 5.3 and 4.8 in Dachais and Lat, respectively.

3.1.4 Average arable land area owned per household: About 36% of all sample households had from 0.6 to 1 ha; 55% cultivated on an area of 1 to 1.5 ha, and 19% had more than 1.5 ha. In Dachais, it showed that the average arable land area owned per household was only 0.45 ha. Farmers from Lat Commune had larger arable area, which are 2.15 ha.

3.1.5 Land ownership: According to the respondents, it was three-fourth of parcels of land had Land-use-right certificate, although the study team could not confirm this

figure. Other land has been waiting for issuing of land use certificates. None of sample households was found to rent the land for cultivation. According to Commune People Committees of study communes, more than 70 percent of land in Lat has been issued red-book and delivered to farmers and the rate is much lower to farmers in Dachais Commune.

3.1.6 Water resource: Most of households in both Dachais and Lat communes have problem with domestic water in the dry season. Recent time, people are able to have clean water using the network of water pipe, bringing clean water from mountainous area to their home. But they have to pay for this water supply system, although the current fee is not so high, which is about 1,000 VND per 100 liter.

3.1.7 Main crops: Cultivation in study sites is not very much diversified. Although according to report of People Community, local people have planted dozens of crops in the areas but in facts, the survey finds that major crops in Dachais are coffee, persimmon, corn and jam. In Lat, people grow coffee, vegetables, persimmon and beans. In terms of economics, farmers in Dachais consider coffee as their unique cash crop while farmers in Lat are able to have on-farm income from coffee, vegetables, flowers and persimmon.

Table 3 Crops grown in Dachais and Lat communes, 2008

Crops	Area (ha)	
	Dachais	Lat
1. Coffee	120	764
2. Corn	143	23
3. Persimmon	54	60
4. Sweet potatoes	23	0
5. Jam	16	5
6. Vegetables	12	540
8. Cassava	12	0
9. Beans	2	38
7. Rice	0	76
11. Flower	0	9
10. Strawberry	0	2

Source: People Committee of Dachais and Lat Commune, 2007-2008

3.1.8 Household Income: The average household income and respective sources of income are presented on Table 3. Annual gross income of household varied from 6,000,000 VND to about 36,000,000 VND. To households in Dachais, one-fourth income is from coffee production. Others include payment from forest protection contract and working for vegetable company in Lam Dong Province. The labor for hire is only for short term and unstable. Households in Lat Commune have better income. With more land resource and capital, farmers there are able to earn from 25,000,000 VND to 36,000,000 VND per year, some families in Lat Commune even have income more than 50,000,000 VND since they have sufficient investment in finance and technology. In general, farm households in Lat Commune had more income by better productivity of coffee and other additional income source. Their source of income is more diversified than that of people living in Dachais Commune.

Table 4. Income of sample households

Unit= '000 VND

Income	Dachais	Lat
1. Gross annual income	6,000	36,050
2. Household Income Structure		
On farm	1,500	30,300
- Coffee	1,500	25,300
- Others (vegetables, flowers, livestock)	0,000	5,000
Off farm	4,500	5,750
- Forest protection	2,800	2,800
- Labor work for hire	1,700	2,950

Source: Households survey, Dachais and Lat communes, 2008

3.1.9 Coffee production: Coffee is the two major crops in this area, but this production does not receive much support from local authorities. The area of coffee has changed in relation the variation of coffee price. Attracted by high price of coffee, many local farmers have more incentive to invest into coffee. The average coffee yield 1,150 kg and 9,000 kg in Dachais and Lat, respectively. That big

difference between two sites is caused by various factors, such as the age of tree, variety, soil condition, water resources, and cultivation technology. However, the most important factor is investment. Except few old coffees farms, most of other farms in Dachais have been established within 3 years therefore the yield has not reached as high as level of coffee farms in Lat yet. Farmers in Lat are replacing old Moca variety by Catemo which could increase the yield. The water supply for coffee production in Lat is not as good as in Dachais. But farmers could invest enough to irrigation and increase the yield by intensification. Many of farms in Dachais could not invest required fertilizer for the trees. Findings on this issues shows that total input cost per hectare was often below 1 million VND while this figure in Lat's farms was nearly 40 million. Indeed, farm household in Dachais are very poor and even they understand the needs of fertilizer supply for coffee they still cannot afford, causing significantly reduction in the yield.

Table 5. Coffee production in sample sites

Indicator	Unit	Quantity	
		Dachais	Lat
Yield	kg/ha	1,150	9,000
Price (raw)	'000 VND/kg	4.3	4.1
Area	ha	0.45	2.15
Gross revenue	'000 VND	2,225	79,300
Input cost per ha	'000 VND	725	44,400
Labor cost per ha	'000 VND	0	9,600
Income			

Source: Households survey, Dachais and Lat communes, 2008

3.1.10 Household expenditure: In Dachais, it found that more than 80 percent of household's income was spent for food and other basic needs. The left income covered expenditure related to children study, social occasion, among others. In absolute term, it was approximately 100,000 VND available for a person each month. The figure indicates a very hard situation for people. In Lat Commune, the expenditure is quite different. Aside from expense for food and basic needs,

households have budget for re-invest in production. More than 45 percent of total revenues are invested in cash crop production, followed by 33 percent for food and basic needs and the rest is spent for education, house and life facilities.

3.1.11 Market: Market is necessary condition for production development which in turn, becomes important factor for livelihood improvement. In fact, local market in Dachais is quite small and affected by difficult transportation. Constraints regarding post-harvest technology and limited capital for producers and processors all reduce the benefit of farming business to stakeholders. Limit access to market information and developed technology cost household's benefits. Farmers don't know or cannot predict well about prices of their products, hence they lost their income and good opportunities in farming business. Farmers in Lat Commune have more advantage because of better location, human capacity and better local economy. Agricultural market in Dachais mostly related to coffee production. In Lat Commune, marketing channels are working for coffee, persimmon, flower and vegetables, offering more choices and opportunities for local community.

3.1.12 Access to credit: The Agricultural Development Bank of the district gave limited loans to poor farmers. Interventions include the establishment of a small revolving fund to test their ability in managing this micro credit system to develop some income generation activities. To formal credit, Agriculture Bank and other credit institution supply particular capital for producers. Production of coffee or livestock required specific amount of capital and this can be solved by microfinance activity. Furthermore, middlemen in coffee market can help poor farmers access to informal credit sector. Lenders belong to informal credit sector can allow farmers borrow up to several million VND depending on the financial capacity and productivity of coffee. This helps the development of coffee production and on the positive side; it makes coffee growers available in supply sufficient inputs.

3.2 On- and Off-Farm Income Earning Activities

3.2.1 Forest protection: More than 90 percent people in Dachais signed contracts for forest protection. In Lat Commune, this rate is less than 50 percent. Contractors are in charge of taking care the forest, preventing forest fire and illegal cutting. However, it seems that farmer's lack of adequate understanding of the goals and approach for implementing. This kind of contract is to support reforestation or to budget households activities to protect forest. In theory, forest protection contracts are aim to mobilize local people in forest protection on a contractual basis and forest land allocation for forestry use. The contract is considered as a way to help the local community aware of participatory approaches that might be helpful in forest management. However, its limited amount of payment, which is 2,800,000 VND per year for each contracted household, has affected the meaning and effectiveness of this intervention. From collaborating in forest management between government and local community it has been understood as somewhat to subsidize to local people.

3.2.2 Labor for hire and other off-farm activities: During off-season, people in Dachais are able to work for some companies or enterprises located in Lac Duong District. Daily rate of payment varies from 60,000 to 70,000 VND. The work is temporary and could offer from 30 to 40 per year to local people. Labor-for-hire among household is very limited and could not seen in Dachais Commune. This situation is a disadvantage to community showing that it is not dynamic and quite subsistent livelihood. In Lat Commune, the situation is better. Better off households are able to budget to hire labor, creating additional job for the poor. There are other off-farm income sources like small shops, tradition production on textile, wine.

3.2.3 Farming activities: At the present coffee is the key cash crop to local people both study sites. The increase of coffee price attracts more and more farm changing other cash crop into coffee. Coffee areas have increased significantly.

Income from coffee is about 4,200,000 VND per hectare and still increases. In Lat Commune, income from coffee is more than 20 million VND per hectare, quite high compared to that in Dachais Commune. It can see that livelihood of local people heavily depends on the coffee production. In one hand, easier access to credit for coffee production may encourage more farmers to specialize this crop and take opportunity of having better productivity and profit. But the negative site of informal credit may consist of heavy risk for households when coffee price suddenly goes down. On the resource management point of view, to be so much attracted by the land rent related to coffee production could destroy the target of soil conservation, threatening water resource and increasing of deforestation.

Intensification of coffee production in Lat Commune is much better than in Dachais commune. It is due to better socio-economic condition of people living in Lat. In Lat Commune, it found that nearly half of gross revenue from coffee is used for re-investment of inputs and labor.

Production of other cash crops: Aside from coffee, farmers in Lat Commune plant other cash crops like vegetables and flowers, jam, supplying more income and increase efficiency of land use. Sum of this additional on-farm income is about 3,000,000 to 4,000,000 VND per households each year.

Animal production: Results of survey show that farm households in Dachais Commune are facing hard constraints on weather and animal diseases. They used to feed many animals, such as horses, cattle, and pigs in Lat Commune and many cows and chicken in Dachais. However, at the present time only few households maintain their livestock with cows and pigs or poultry. Poultry and pig production are not very efficient, contributing insignificantly to household's income. Local authority used to implement AOC program which support animal rising of community but the program was not successful based on the output given by stakeholders.

Meeting extension officer is assumed important to farming efficiency of local people. But it found that farmers in Dachais Commune did not often meet extension workers. Nearly 80 percent of respondents said that they met extension workers once to twice a year to gather information on variety, diseases or inputs. None of them think that extension can advise them about the market and investment plan. In Lat Commune, extension is considered more necessary by farmers, due to the situation of agriculture and awareness of people. Above 70 percent of farmers in Lat Commune praised the extension activities based on benefit they obtained through meeting extension workers.

3.3 Land Use and Land Use Change

3.3.1 Expansion coffee area: farmers base their decisions on short-term market expectations rather than on long-term market information. Therefore when the price of coffee increased they tend to expand this crop area. A bandwagon effect in coffee planting was observed in the study sites. Farmers in Dachais have grown coffee without knowing much on the cultivation technology, appropriate varieties to the type of soils and weather. Coffee has been grown even on very slopping hillsides where the soil and water condition are not suitable. In addition, poor households, especially farmers in Dachais Commune are shortage in capital needed in coffee production, ignoring any soil erosion control practices. As a result, farmers obtain very low yield. Nevertheless, this practice may cause high soil erosion to the farms.

Only in 2008, the increased coffee areas are 44 ha and 59 ha in Dachais and Lat communes, respectively. In the past, a large expansion of area planted coffee Central Highland happened in Central Highland. Coffee area was increased not only by the transformation from forestlands but also by a shift from other

perennial trees. The same situation would happen again at the study sites if there is no intervention from government.

3.3.2 Risks in land use: There are risks associated with coffee as well as other cropping system at the study sites. Production decision take place without consideration important issues as long-term benefit for society, resource conservation, food security and marketing capacity. All can impose a threat to quality of land resources in local area. In the process of transformation of land use in, deforestation, degradation of soil and unsustainable agricultural production practices have been observed in the study sites, especially in Dachais commune.

3.3.3 Changes in the policy: Regarding to land use, recent changes in land sue policy give farmers more power in management and making land use decision. The positive impact of this is fact of economic improvement of people in Lat Communes. They are able to improve their living standard through intensification, mobilize credit and applying technology. But the negative point also is found in Dachais where people inefficiently use the land or unsustainable exploit this resource for short-term benefit. This raises the question for government to set up policy and regulation according to land use for these sensitive areas. How changes in land use create new risks to the environment and the livelihood of the farmers.

3.3.4 Land use right: Farmers in the study sites need land use right certificate for long-term investment on their land There were 26 out of 40 respondents in Dachais (65 percent) reported that they had land use right certificate. But the survey team was not able to confirm. In Lat Commune, the figure is 85 percent (51 out of 60 respondents). According to local authorities from two Commune People Committee, part of that land without certificate will be issued in the future.

3.4.5 Forest protection management: This is a sensitive point and it makes a real challenge to management people. Given a very limited source of income earning, ethnic groups could lose significant benefit proportion for their livelihood when the government effectively restricted access to the forests for livelihood. People in

Dachais although could not report precisely how much products or income they gathered from forest, but based on the analysis of farming income the study team believe that they are still very much depend on the forest. The payment from forest protection contract is insufficient to their needs of expenditure or cannot cover fully total their expense.

The results of interviews showed that most of respondents could not give their effort fully to accomplish the task. They just spent limited time for staying in the forest. Moreover, several households even could not know exactly how many hectare of forest are under their taking care duty. Contractors gave more efforts on activities driven by market forces. It raises the question concerning the effectiveness of such program as well as the livelihood of people whose income partly come from this contract. This point is also corroborated by the comments of Corbett (2008) when he pointed out problems of engaging the participation of local public and private sector in park management.

3.3.5 Soil erosion control: To the current cultivation area, there is a need of support and encourage local people to practice soil conservation activities. The existing farming activities, level of erosion, use of chemicals, and lack of Sloping Agricultural Land Technology (SALT) are found during the survey and field visits. There are two options. First, to the group of people who do not understand about soil conservation practice, mainly in Dachais, it should have training and demonstrations to help them apply. The second group includes farmers who really do not care about sustainability of the land; it needs to have intervention on cultivation activities made by local authority and association.

3.3.6 Existence of several institutions related to natural resources management: There are 4 institutions having function forest management, namely, Management Board of Bidup-Nuiba National Park, Da Nhim Protection Forest Protection Board, Management Board of Tourist Site Dann Kia Suoi Vang, and Ta Nung Forest Management Board. Each institution can establish contracts to local people

and communities in protecting resources and environment. However, there is lack of effective collaboration between them. They have different goals and benefits but the approach when making “collaborating management” did not have typical characteristic to people

3.4 Factors Improving Household’s Income

Following factors are found that affect the livelihood of local people:

3.4.1 Land and productive resources: According to survey result, households in Dachais have not enough land or at least land with certificate. Since in this site, agriculture is the key income earning source, lack of land clearly leads to poor income. The consequence even more serious because low human capacity of local producers. In the case of Lat’s farmers, households with sufficient supply of land and inputs received high return from production, ensuring better livelihood. Result from both sites indicates that re-distribution of land and productive resources or re-settlement households could be a factor helps to improve their life.

3.4.2 Choice of cash crop: The survey results reveal that generally farmers now find coffee as a more secure crop. With the low price of persimmon and vegetables, the cultivation of coffee is more profitable. Large coffee farmers afford to intensively invest in coffee. Medium to small farmers even want to shift to coffee if coffee price continues to remain at recent prices. Households with rational decision of what products would be better in income. Actually, the choice of crops depends not only on economic condition but also human capacity.

3.4.3 Access to market: It is clearly that sample households in Lat Commune have access to market better those in Dachais. Farmers’ decision is usually based on current market value. When they lack of information, especial for long-term value, opportunity to improve production and livelihood is smaller. To cope with the fluctuation in market price, farmers in Lat Commune diversify their farming activities by planting more than one crop and investing in other livelihood

activities such as animal production, cattle and pigs. Results of survey show that to secure a stable income, most of them have diversified and intensified their production. Common crops in Lat Commune include vegetables, persimmon and coffee. Farmers also feed horse and pigs to increase family's income and gather organic fertilizer for cultivation. However farmers in Dachais Commune are quite limited in diversifying their crops or production. They mainly grow coffee and persimmon with low level of investment. Livestock has poorly developed due to bad weather and disaster, according to the survey.

3.4.4 Credit and other supporting intervention: Households that are able to access credit or receive supports from government have necessary condition to stabilize and develop their livelihood. It noticed that many farms in Dachais also got credit and help from government but their livelihood is unstable. That was caused by the real level of credit and support. Respondents complained that the loan was so short to their needs; the support of 10 kg of rice for each household (from Poverty Production Program) could not bring significant effect to their family. Basically, when households are offered more credit and supporting program, probability to improve their livelihood is higher.

3.4.5 People health and education level: This is a feature of many upland indigenous ethnic minority groups in uplands. Malaria, malnutrition, and respiratory infections affect health of local people. In addition, limitation in education reduces the value of human capacity and hence negatively influences their livelihood.

3.4.5 Forest resource management regulations: The inappropriate resource management regulation, over-rigid planning and regulatory framework, and poor follow-up in the local authority of central government regulations are institutional factors affecting community.

3.5 Constraints and Advantages to Local People Livelihood

Constraints to local people livelihood are as follows:

3.5.1 Access to credit: Although credit alone does not assure to improve livelihood, but lack of capital is always a problem to the poor. Both study sites have the same situation. Actually, many sample households in Dachais and lat could not borrow enough money for their needs because they have no property for collateral. Land use right certificate become main constraint to poor family when the access credit.

3.5.2 Fragility of the agricultural production systems: the of cropping system in Dachais is another constraint to households there. Agriculture depends too much on a few crops making the local economy unstable. People easily face coffee off-season when they have no source else of income. The shock of market could heavily cost their livelihood.

3.5.3 Human capacity: in general, human capacity of ethnic people in upland areas often has disadvantage in term of education, social capacity and technology. In the study sites, low schooling level of people, shortage of experts or scientist are strong constraint for them in development. Human capacity of respondents is shown by their awareness on livelihood improvement, technical change, investment, tourism development.

3.5.4 Implementation of forest protection contract: Concern has been expressed by respondents about the low payment (or subsidy) ranging from 2,400,000 to 2,800,000 per family who are in charge of forest protection. This concern has been raised in the context of the recipients of titles still being eligible for financial support, given that real incremental benefits might not accrue while the payment is too low.

Advantages of local communities are as follows:

3.5.5 Land and landscape: natural resources in the areas really give advantage for local people and community in developing business like tourism. Despite that the

study has no objective of evaluation those natural resources value, but the results of survey and meetings with local people showing that both study sites have very strong advantages in terms of land, forest and landscape.

3.5.6 Infrastructure: Any development of economy relates to development of infrastructure. In the study site, the newly constructed 723 Road could be another advantage for local community (off course it also makes possible destructive impacts to the resources). Development of infrastructure leads to advantages on transportation, tourism, market, business, and the chance importing modern technology.

3.6 Possibility of eco-tourism development

3.6.1 Eco-tourism means not only protecting the natural environment but also means proper consideration of local people, communities, conserving their customs, lifestyles, and social and economic system. It is tourism that truly benefits stakeholders while do not exploit and degrades the environment. This part of report to present the result of survey and analysis on the opportunity to develop eco-tourism based on the opinion and comments of respondents.

The team describes eco-tourism to local participants and introduces the changes that could happen with eco-tourism development. Based on the issues of environment and livelihood related to local people, noticeable points are recorded.

3.6.2 Local human resource: To measure the awareness on tourism and eco-tourism, the interviewers requested sample farmers to describe the common work related to tourism, which benefits could be accrued and what impacts could be produced by tourism to local community. In general, respondents did not show much knowledge or awareness on these issues. But several households in Lat Commune got good awareness on the benefit and possible impacts from tourism to local community.

3.6.2 Chance of participation to share benefit of eco-tourism: it is not high opportunity for local people actively participate the eco-tourism business. Due to limitation of education and skills, and other economic condition, respondents believed that they have not much advantages to compete for good role in that business. In Dachais, respondents mentioned about the income they would earned through selling traditional food and products to visitors. The comments of respondents in Lat especially show their interest on the effect of tourism and eco-tourism. Most of them tried to balance the benefits and costs of that business and were worried about the quality of environment. They also mentioned on possible impact on traditional culture. Through the meeting, it can say that eco-tourism is still very strange to local people. They do not have enough knowledge, ideas and therefore, they don't consider them as future participants. Especially, there was no idea about how agricultural production will change.

IV. SUGGESTED SOLUTION

The solutions are identified based on analysis of community's situation and its livelihood environment.

4.1 Promotion of sustainable agricultural practices: Agricultural cultivation and other land use activities should consider long term impact. In fact, technical transfer together with subsidy has been done by government. It should be continued because the local communities will comply with that only they have been trained and support a certain number of times.

4.2 Extension: At least good productivity of farms in Lat Commune has proved effectiveness and importance of extension activities. The community has benefited from special extension training and they have been able to apply them. This lesson can be used for Dachais with more emphasis on human capacity building, like education for poor households, offering temporary jobs for people.

4.3 Increase productivity of coffee production: There is a high need for increase coffee productivity in Dachais. The lack of technology and capital heavily reduce

crop yield, although the soil here is suitable and water resources is quite advantage. In order to increase the yield, farmers need to access credit. The problem is how to make sure the loan will be used for coffee production not for food consumption, especially when most of coffee farms in Dachais are below 3 years old. The trees need more investment and farmers have to wait till peak period of profit earned form coffee. In the other side, economists and managers should as soon as possible show out analysis and prediction about coffee, hence, to make right decision on this industry.

4.4 Diversification in cropping: Farm households in Dachais should find ways to diversify their cropping system. Local authority and relevant organization should cooperate to recommend and develop other crops not only coffee. Although it is market driven scheme but when farmers have nor been able to access the market, the intervention of researcher and government is very critical. Upland vegetables flowers, food crops (potatoes) so on are among the recommended names. Livestock needs to be re-invested too.

4.5 Poverty reduction program: It is necessary to re-consider program activities done in the study sites. The value of program cannot be seen on number of households that escaped poverty line only, but their sustainability of livelihood. Furthermore, their ability to survive with the shocks as disasters, economic crisis, and capacity in business is other indicators that seem are missing in the program.

4.6 Human capacity building: Partnership building through networking and Information Sharing. Partnership building and coordination efforts from the counterpart institutions have been encouraging, and the development of such partnerships has been essential for effective networking and information exchange regarding eco-tourism development.

V. CONCLUSION

Based on the analysis of survey's results, following conclusions and suggestions are made:

- Livelihood of people in study sites will be not sustainable unless there is a policy changes with effective practices implemented to local community. Household's income in study sites was relatively low and the source of income is so limited. Improvement of major cash crop cultivation such as coffee and vegetables, so on always is a basic strategy to improve their livelihood.
- The differences of income and productivity among sample groups in Dachais and Lat communes are found highly significant. It is possible to be used as an experience to learn how to develop livelihood of an ethnic community in the context of natural resource management.
- The outcome from surveys is not able to show a meaningful contribution of people to natural resources management, but it raises the question of instability of resources, unless there would be government intervention right.
- Another objective of this study is to determine whether eco-tourism could positively change the people livelihood. The answer could be yes or no, depending on the need of eco-tourism there, on how to solve the problem and constraints and how to utilize advantages.
- Identifying appropriate factors affecting livelihood activities needs to be seen in the context of the characteristics of natural and socio-economic systems that exist to study site. These characteristics are as follows: (i) community capacity and assets, (ii) network of managerial institutions, (iii) human resource capacity. All community members have equal access to forest resources. It is usually respected by the rest of the community.
- Human capacity is considered as an important factor helping farmers to increase their income and improve living standard. It also helps activities of environment protection more effective. Under that circumstance, training local people,

increasing financial and technical investment, changing policy are all expected. Effects can be seen fully only in long-term and not always fully presented in financial terms.

- Findings from Dachais and Lat also indicated a point that resources management need to be studied in comprehensive approach of relevant organizations and the participation of local people. Thus, it can solve the problems caused by conflicting benefits, opinions and plans. Credit, land use policy and any new managerial decision alone could not help accomplish successful the goal of sustainable management.

- Development of eco-tourism in Dachais or in Lam Dong Province in general, is a promising but also challenging option. The study communities have specific advantages for tourism but people, and even authority there are still not well prepared for business activities and management decision when eco-tourism become realistic.