

CHAPTER 1

INTRODUCTON

1.1 Background of the Study

Nepal has been one of the pioneer countries in promoting community management of forest. By mid 1970's pioneering in the Asia-Pacific region, the country has made tremendous progress in community forestry (Singh 1998). Community forestry has become an important program in forestry sector following forest policies like Master Plan for Forestry Sector (MPFS) 1998, Forest Act (1993) and Forest Regulation Act (1995). Since the enactment of these policies, the involvement of local people in the forest management has been increasing significantly. The numbers of community forest user group (CFUG), local level institutions are rapidly increasing and managing large area of forest at community level and it has moved away from being a country of ecological doom (tragedy of commons) to a country of community forest (Shrestha, 2001). To date, more than 1.4 million forest users in Nepal are benefiting from community forest (DoF, 2012).

Forest is an integral part of livelihood of the rural population living in the rural part of the country. People living in communities within and around forests use forest products for food, fuel, medicine, construction, and fodder for livestock and as a fallback when agricultural and other economic activities are inadequate to sustain the household economy. People also depend on the ecosystem services that the forest provide, such as water for household uses and soil for agriculture production. In addition, many people depend on forest for income generation, for example, working in the wood product industries, developing small enterprises based on timber and non-timber forest product (McLain and Jones 2002). It also plays an important role in peoples sociocultural

systems and profoundly influences their sense of place, ideologies, and identities. It is a major revenue earner of the country, which contributing to about 15 percent share of GDP. In fact, livelihood strategies are dynamic in nature, and it is more pronounced in the rural area than in the urban area, as the rural people respond to changing pressure and opportunities. Nepal is one of the few countries in the world where people are to a large extent dependent on the forest resources for their subsistence. Forest also generates livelihood asset like Financial, Human resource, Social network etc. to the local people who are dependent on it. Community forestry program is one of the priority programs of the Government, from which local user get capabilities and asset and develop their livelihood strategies. Livelihood strategies are planning and direction to be able to cope with and recover from stresses and shock and maintain and enhance its capabilities and asset both now and in future (Carney, 1998).

The livelihood of people obtained from sale, distribution and share of the income obtained from the forest product and services as well as the institutional capacity building. It draws upon management of five different capitals, natural capital, social capital, physical capital, financial capital, and human capital. Besides a range of product of daily use, forest and vegetation cover has significant importance in reducing the runoff, increasing soil moisture and in minimizing the problem of water management, which leads to reduce vulnerability context through improving cropping practices. It directly contributes to the household and individual welfare by providing basic forest product, employment and income opportunities.

Because of the slow pace of developing activities in the country most of the people in Nepal lie under the line of poverty. Under such circumstances, major concern of the nation is to raise the living standard of the people through the efficient use of the existing resources. The majority of the people have to use forest products for shelter, food cooking, heating, livestock, feed, and for compost manure. Forest is one of the highly potential resources for livelihood development of the people in the country. This study mainly focus on the Livelihood of forest user group (FUGs) through the income generating activities (IGA) carried out by Community Forest.

1.2 Statement of the Problem

There are several studies on livelihood carried out by sociologists /anthropologists (Chhetri 2006, Bhurtel 2006, Kattel 2006). Their studies focused on change on livelihood of people of particular communities in certain geographical areas. Like changes in the livelihood of Kumal people of Pokhara and Tumlingtar of Nepal due to modern market, infrastructure development and modern education. Despite these studies, livelihood and changes account to still an important and interesting study matter for Anthropological inquire and investigation.

Similarly, it would be native to claim that income generating activities program in community forest are to be seen only in the context of NTFPs. In reality, potentials of IGA program in CFUG for groups as well as for the individuals/user household are evident through the use of timber, non-timber forest product and off-forest IG activities as well. In a way management of CF in general has been taken as a potential fund raising opportunity by most CFUGs and some may have become too 'econo-centric' (Chhetri et al., 1998).

In the present context of widespread poverty, it is not possible to contribute more to community forests if they do not produce financial benefit, directly or indirectly for households. In fact, due to the area of productivity of forest, it is possible for FUG members to get financial benefit from community forests. However, it seems that there is still no link between CF and poverty. How do people use natural, physical, financial, social, and human assets of CF for their livelihood? As an anthropological point of view it was interesting topic for me to find out the relationship between different assets associated with CF and livelihood of local people.

At the time of initiation, community forest supposed to provide basic forest product to the local users. After three decades of implementing the program in Nepal, it is going on changing process, from fulfillment of basic need to community and socioeconomic development of local people. However, it is essential to know whether local people get benefit from their community forest or not. It is a researchable question itself.

In Nepal the government and non-government organizations, development workers have been formulating different policies and projects and implementing them to reduce poverty in Nepal. It has been implementing more specifically from the 9th Nepal Development Plan of government with aims to alleviate poverty. By giving the continuity of the 9th plan, the 10th plan has explicitly mentioned that community forests could benefit 20000 communities including women and disadvantaged groups and strengthening their institutional capability to manage and monitor the supply of the forest products for fulfillment of the daily needs of the communities.

Elite groups in the villages dominate decision-making and they can neglect the interest of the other people. This raises a question of how democratic is the decision making process when it occurs under social condition of inequality. Many poorer households complained that there is no way they could speak their mind in front of their leaders of the FUG. Economically depressed, exploited, oppressed, and lower caste women and people are generally disadvantaged group in the FUG. It is perceived that community forestry can contribute substantially in the livelihood especially in the rural area of the country. But the contribution of community forest on the rural livelihood of disadvantage people investigated rarely by the past research still there are some lacking information 'how and how much 'community forests are contributing to the livelihood of forest user group? What factors contributing to the livelihood asset of people? Based on the problem raised above following are some question needs to be explored from anthropological perception.

1. What are the sources of income and area of expenditure FUGs fund?
2. How and what type of capital (asset) they have?
3. How the CF contribute to the livelihood of disadvantage group?
4. Which income generating activities could be effective for disadvantage group?
5. What forms of livelihood diversification has occurred as a result of CF and what could be the potentialities for improvement.

1.3 Objectives of the Study

The general objective of the research is to examine the impact of community forestry on livelihood of Padali FUGs of Lamatar VDC and Mahila Hariyali FUGs of Bishankunarayan VDC in Lalitpur district.

The specific objective of the research will be as follows.

-) To identify the different assets/capitals in Padali and Mahila Hariyali Community Forest Users Groups,
-) To identify income generating activities carried out by PCFs and MHCFs, and
-) To examine the impact of these activities on livelihood of user group

1.4 Significance of the Study

This is an anthropological study carried out about impact of community forestry on livelihood based on ‘assets/process/activities’ framework. It tries to analyze some of the livelihood factor arising from community forest. The assets provided by CF are supply of forest products including timber, fodder, firewood, income generating activities, soft loan provision from FUG fund for employment generation activities, education and health facilities at the village level, prevention from soil erosion, supply of leaf litter for manure and programe run for capacity building of the disadvantage people. Therefore, this study will examine these various assets connected with CF and its role to the livelihood of CFUGs at two socially and culturally different groups of Kathmandu valley. In this context I hope that this study will be valuable document to the further researchers and readers who interested in the issues. Therefore, the study should be taken as a reference for further studies in CF program. Moreover, this study will also be beneficial for concerned organizations, planners, policy makers and development practitioners, who are working in the same field.

1.5 Theoretical Perspectives

This research is based on ‘assets/process/activities’ framework proposed by Ellis (2002) in his book *Livelihood Strategies in Developing countries*

that is widely used by various researchers to the study of poverty, sustainability, and livelihood strategies (Carney 1998; Scoones 1998). This framework is also known as Sustainable Livelihood (SL) framework. Assets in this framework include: human capital (the education, skills and health of households members); physical capital (e.g. farm equipment or a sewing machine); social capital (the social network and association to which people belong); financial capital and its substitutes (saving, credit, cattle etc.); and natural capital (the natural resource base). In this research I have also used this theoretical model to analyze the different assets like human capital, physical capital, social capital, financial capital and natural capital of community forest user groups to analyze their livelihood. In this research, I have also used these assets to examine the contribution of CF on the livelihood of the local forest users among two different villages.

1.6 Organization of the Study

This study is divided in to seven chapters. The first chapter is an introduction of the study, statement of problem, objectives, significance of the study, theoretical perspectives and organization of the study. The second chapter is review of literature. The third chapter presents the methods applied in to obtain the answers of research questions. The fourth chapter gives the general geographical and demographic accounts of study area. This chapter also discusses about physical and socio-cultural settings of the study site. The fifth chapter discusses the socio-economic profile of the people of the study area and assets available at Padali and Mahila Hariyali Community Forest. The chapter six presents the contribution of CFs on livelihood, IGA carried out by CFs and its effect on livelihood and the final chapter are about concluding remarks of the study.

CHAPTER 2

REVIEW LITERATURE

2.1 Historical Overview of Community Forestry

Anthropologist and other social scientists have documented many ways in which indigenous and local peoples have sustainably managed forests in the past through techniques such as practicing swidden agriculture for crop production (Charley and Poe 2007). When European powers established colonial rule in the beginning in the sixteenth century they appropriated much of the forest estate in the countries and the globe, claiming it as state property and altering and often undermining customary forest tenure and management systems. Commercial timber extraction was largely unregulated until the nineteenth century, when colonial governments began to establish centralized, bureaucratic forest department to implement “modern”, scientifically based approaches to forestry following the European model. Since world war II , industrial-scale timber extraction conducted by states and private-sector timber companies having logging concession or other forms of access to state lands has been the dominant form of forestry practiced on state forest land in many tropical and temperate regions.

Community forestry emerged in different places between the 1970s and 1990s as a response to different combination of factors, but key drivers have been deforestation and forest degradation occurring as a result of decades of overexploitation from industrial logging and local people started collective action against centralized, bureaucratic forest governance structure and destructive resource extraction practices. This brought pressure on National governments to address rural poverty and social inequality on the part of intergovernmental organization such as World Bank, United Nation Forum on Forest, and Food and Agriculture

Organization (Arnold 1992). Resistance to the top-down approach to development assistance, practiced in the 1960s and 1970s, that was seen that a push for more decentralized, bottom-up approaches to development (Chamber 1983). Then, the availability of financial and technical assistance from international development agencies, foundations, banks, and nongovernmental organization supported to community forestry worldwide. As such, the rise of community forestry can be viewed as part of a larger movement towards community-based natural resource management and conservation.

2.2 Nepal's Community Forestry Programme

In Nepal, government legislation in 1978 formally recognized the rights of villagers to manage some government forest lands through territorially based political institution called panchayat (Acharya 2002). In 1993 a Forest Act was passed, which together with subsequent regulation and policies facilitated the transfer of forest use rights and management authority over state forest lands to local forest users. Community Forest Groups were established and legally authorized to make forest management decisions. By the early 2000s, nearly one-quarter forest area in Nepal was being managed by Community Forest User Groups (Acharya 2002).

Nepal's community forestry programme involves the transfer of responsibility for management of forest resources to local people. As these resources are to be managed collectively by the 'community'. It has been promoted on the basis of following premises. (a) The Forest Department has not been able to control forest depletion in any effective way due to relatively limited manpower in comparison to large dispersed population and the wide geographical distribution of forest resources.(b)

It has been recognized that some level of local responsibility for management is only way to achieve sustainable use of forests. It exists in the context of a common view that rural people have been responsible for the perceived environmental crisis in Nepal.

2.3 Livelihood and Livelihood Strategies

The concept of a livelihood is widely used in contemporary writing on poverty and rural development, but its meaning can often appear elusive, either due to vagueness or to different definitions being encountered in different sources. Its dictionary definition is a 'means to a living', which straightway makes it more than merely synonymous with income because it directs attention to the way in which a living is obtained, not just the net result in terms of income received or consumption attained. A popular definition is that provided by Chambers and Conway (cited in Ellis 2002) where in livelihood 'comprise capabilities, assets (stores, resources, claims and access) and activities required for means of living'.

The important feature of this livelihood definition is to direct attention to links between assets and options people possess in practice to pursue alternative activities that can generate the income level required for survival. For example, lack of education means low human capital, and this excludes the individual from activities that require a particular level of educational or skill attainment for participation in them.

While talking about the linkage between capabilities and livelihood, Sen argued 'capabilities' should link with livelihood (cited in Ellis 2002). In his view capabilities refer to the ability of individuals to realize their potential as human beings (i.e. to be adequately nourished, free of illness being and so on) and doing (i.e. to exercise choices, develop skills and

experience, participate socially and so on. Here, livelihood definition is potentially confusing because its meaning overlaps the asset and activities. This is one of confusing process and outcomes (Ellis 2002).

In Conway and Chamber definition (1992) asset contain number components, some of which do not namely, claims, and access. There is no difficulty in accepting asset as an essential component of any definition of livelihood, however there remains disagreement as to what types of capital or stock can legitimately be included under the overarching description of assets. Following the Chamber and Conway, Scoones (1998) have identified five main categories of capital as contributing to asset in the livelihood definition; these are natural capital, physical capital, human capital, financial capital and social capital. Here natural capital refers to the natural resource base (land, water, trees) that yields product utilized by human populations for their survival. Physical capital refers to asset brought to existence by economic production process, for example, tools, machines, and land improvement like terraces or irrigation canals. Human capital refers to the education level and health status of individuals and populations. Financial capital refers to the stock of cash that can be accessed in order to purchase either production or consuming goods, and access to credit might be including in this category. Social capital refers to the social networks and association in which people participate, and from which they can derive support that contribute to their livelihoods.

An important attribute of livelihood that is subsumed under asset in the Chamber and Conway definition is the access that individual or households have to different types of capital, opportunities, and services. Access is defined by the rules and social norms that determine the

differential ability of people in rural areas to own , control, otherwise ‘claim’, or make use of resource such as land and common property (e.g. Scoones, 1998;8). It is also defined by impact of social relations, for example gender or class, on this ability. Access in addition refers to the ability to participate in, and derive benefits from, social and public services provided by state such as education, health services, roads, water supplies and so on.

Institution has been described as ‘regularized pattern of behavior structured by rules that have widespread in society. Local level institutions may work differently from those operating over a large territory, with overlaps and conflict between them, for example, customary land tenure may conflict with land ownership regulation passed in capital cities.

2.4 Forest and Rural People

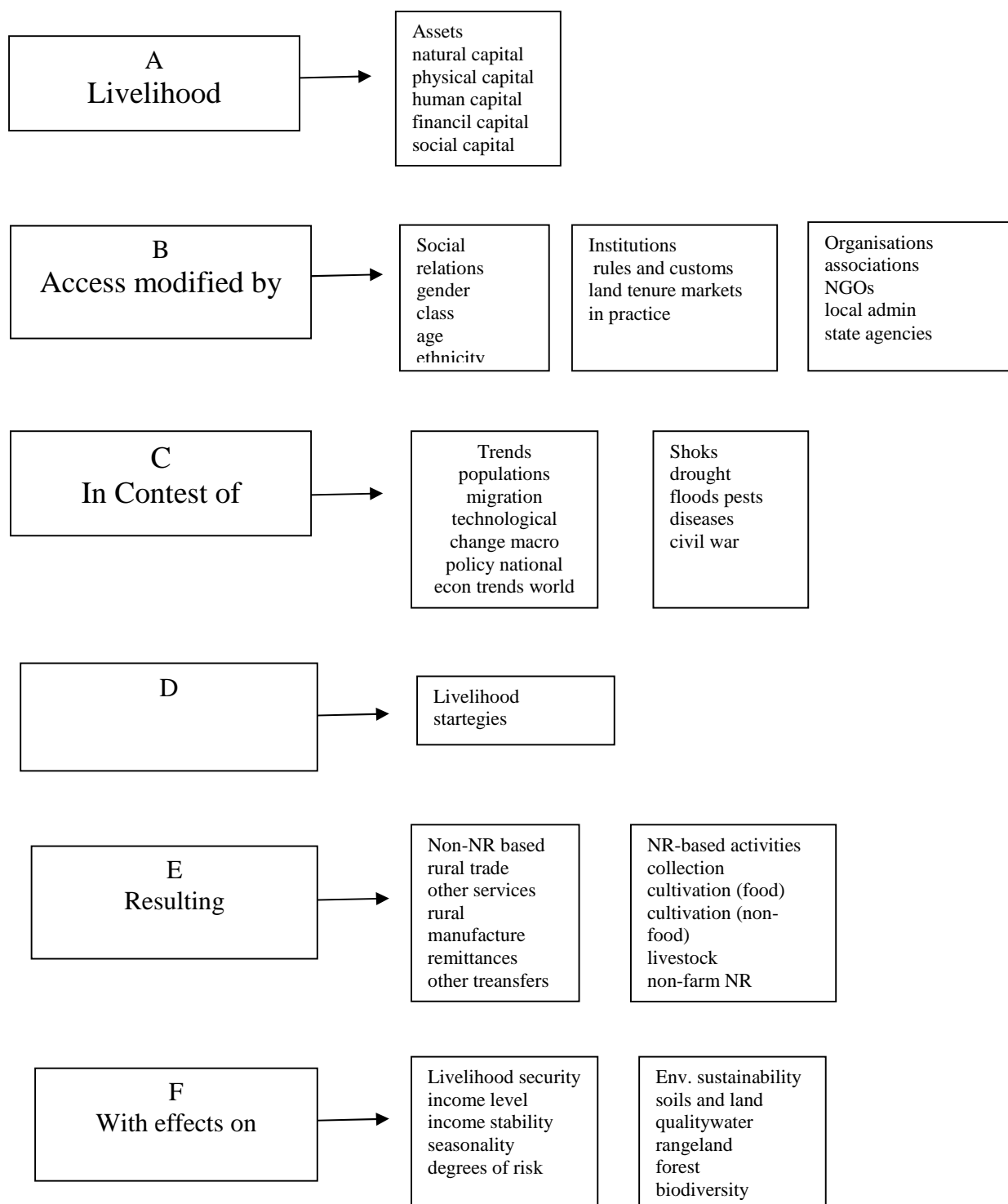
Tree and tree product are just as essential to farming system as crop and livestock for rural people. It is difficult to imagine the farming system without access to forest. People and forest have existed in interdependent relationship for centuries. The majority of the local rural people depend on forest for range of product like fuel wood, fodder, timber, and medicinal plants, which are important to sustain life of the Nepalese people (Adhikari, 1990). Fuel wood is major source of energy for cooking and heating and contributes 80% of the energy needs. Timber is widely used for buildings, furniture and other works. Tree leaves and ground grass of the forest account high fodder fed to animals and leaf litters are used for animal bedding and manure/compost and green manuring (Glimour and Fisher 1991). Fodder is an essential input to the farming system and contributing to the more than 40% livestock

nutrition. Many other products like medicinal herbs, root crops, and fruit, charcoal are derived from the forest. Besides the range of product for consumptive use, forest provides a number of direct and indirect benefit like recreation/tourism, protection of land and water resources, conservation of soil moisture etc, which has significant contribution to livelihood of local people

2.5 Defining Income Generating Activities

The act and the Rules do not mention anything directly on IGA. Forest Act (1993) makes a provision for a CFUG Fund of its own. According to the Act, the cash obtained through the sale and distribution of forestry products is one of the amounts that should be deposited in the CFUG fund. Forest Rules (1995) only makes a provision about the management of that fund (Rule 36). The list of IG activities in the document of government agencies, Project and NGOs would mostly include: 1) off-forest income earning opportunities like livestock raising , vegetable /fruit farming , bee keeping, sericulture, etc. 2) agro-forestry activities like farming cardamom, Amriso (*Thyrsanolaena maxima*), in CFs. 3) Minor forest product based activities like making of bamboo basket , mats, etc.4) Forest product/ timber based activities like Saw mill.5) Collection and selling of selected NTFPs. Of these, the last two types of income earning activities are not as widespread as the others-perhaps because of the lack of clarity as to what all should be allowed in the name of IGA by communities or local people.

2.6 A Framework for Livelihood Analysis



A framework for micro policy analysis of rural livelihoods

Source: Cited Ellis (2002)

The starting point of the livelihood analysis is assets owned, controlled, claimed or in some other means accessed by household. Framework illustrate above contain five asset categories of natural capital, physical capital, human capital, financial capital and social capital. We have already described about it. Key categories of factor that influenced the access to asset and their use for viable livelihood are social relation, institution, and organization on the one hand and trend and shock factor on the other. In framework social relation are distinguished from institution and later from Organization (Column B). Social relation refers to the social positioning of individuals and households within the society. This social positioning comprises such factor as gender, caste, class, age, ethnicity, and religion.

Institution is the formal rules, convention, and informal codes of behavior, that comprise constraints on human interaction'. Example of institutions are laws (e.g. criminal law), land tenure arrangements (Property rights). The role of institution is to reduce uncertainty by establishing a stable structure to human interaction.

Organizations, is distinguished from institutions are 'group of individuals bound by some common purpose to achieve objectives. Examples of organization are government agencies (e.g. police force, Ministry of Agriculture, government veterinary service), administrative bodies (e.g. local government), NGOs, association (e.g. farmers association), and private companies (firms).

Social relation, institutions and organization are critical mediating factors for livelihood because they encompass the agencies that inhibit or facilitate the exercise of capabilities and choices by individual or

households. The interrelationship between assets, mediating processes, and livelihood activities is a process that is unfolding over time. The manner of this unfolding and the stresses and strain result in new pattern of activity emerging, are influenced by trends and events (Column C).

Some important trends are the rate of population growth (locally and nationally), the population density (locally), rates of out-migration from rural area either to other rural area or to urban centers, agricultural technology and its evolution over time, the growth of non farm activities in rural areas and in the economy at large, relative prices, national economic trends and international trends that mediate and its impact within domestic economy.

Shock represents a particular challenge to livelihood sustainability. In framework, event such as drought, floods, pests, (of crop and animals), diseases (of crop, animal or human), and civil war are listed as shocks. Shock destroyed the assets directly. Example, crop standing in the field in the case of drought , houses and fields in the case of hurricanes or floods, animal number in the case of livestock diseases, human capital in the case of human disease. Shocks are event having widespread impact on rural populations in particular localities. It can be individual and individual as well as social scope. Loss of access rights to land, accident, sudden illness, death are all shocks with immediate effects on the livelihood viability of the individual and household to whom they occur.

The asset status of household mediated by social factor, institution organization in context of trend and shocks, result in adoption and adaptation over time of livelihood strategies. Livelihood strategies are

dynamic in nature they respond to changing pressure and opportunities and they adopt accordingly.

Livelihood strategies generate the mean of household survival. These are given in Column E. which divides between natural resource and non natural resource based activities. Natural resource based activities include collection or gathering (e.g. from woodland and forest), food cultivation, non-food cultivation, livestock keeping and pastoralism, and non-farm activities such as brick making, weaving, thatching and so on. Non-natural resource based activities include rural trade (marketing of farm outputs, inputs, and consumer goods), other rural services (e.g. vehicle repair), rural manufacture, remittances (urban and international), and other transfer such as pension deriving from past formal sector employment. All these activities represent potential contribution to the survival portfolio of rural households.

The final column F is indicator of the outcomes of livelihood strategies. It divides livelihood strategies outcomes between their livelihood security and environmental sustainability aspects. Livelihood security containing some combination of attributes related to income level, income stability, reduction in adverse seasonal effect, and reduction in the overall risk profile of the income portfolio. This makes people becoming less vulnerable or more vulnerable in terms of their capabilities to manage adverse trends or cope with shocks. Likewise, environmental sustainability refers to changes in resilience and stability of resources such as soils, water, rangeland, forest and biodiversity. Environment may improve, stabilize or degrade.

D. Carney (1998) proposes a schematic approach to comparing the asset status of different social group, differentiated according to the broad asset characteristics that the individual or household within them share in common. The approach involves plotting asset status on pentagon. With each corner of the pentagon representing one of each of the five major asset categories. Center of pentagon represent zero level of asset, while outer perimeter would represent the maximum level of that asset. In terms of particular community under study. The pentagon is intended as a descriptive rather than quantities method for evaluating comparative asset status. Community forests are kind of asset of capital, it provides materials, energy and people combine to produce other capital stocks physical, human and financial, from which are derived positive livelihood out-comes such as increased income, increased well being, farm inputs, and reduce vulnerability (prone to stress and shock).Contribution that access to the resource make well being by increasing income of rural poor household.

The asset pentagon depicts information about people's asset. It also suggests important inter-relationship between the various assets. The shape of the pentagon can be used to people's access to assets. The center points of pentagon, where the lines meet, represent zero access to asset. Livelihood and Forestry Programme (LFP) in Nepal, on the basis of above livelihood pentagon (Framework) categorized following five major assets that can be generated from CFs for Sustainable livelihood in Community Forestry.

Table 1: Five Major Asset from Community Forestry

| Type of capital | Specific contribution |
|-------------------|--|
| Natural capital | The forest act 1993 gives assured FUGs ownership to manage and develop the CF, shared access to all users within FUG. The natural capital is dynamic; it is enhanced through human capital. |
| Physical capital | Households get timber for house construction; fodder for livestock and FUG use this capital to establish trails, roads, bridges, community building, health post and schools. |
| Financial capital | Community forests can be used as revenue rising and better access to market in the household as well as community level. Household get raw materials (charcoal), handicrafts, fuel wood to sell in to the market, medicine and NTFPs, income generation activities, provision of small loan and saving of money. |
| Human capital | CF provides the opportunity to increased capacity building, participation of poor and women, increased in the skill related activities, provides food in lean period of the year. |
| Social capital | Good institutional arrangement empowers the disadvantage group, partnership establishes with other institution, collective action, and rural strong institution to perform community work effectively. |

Source: Livelihood and Forestry Program, Nepal

These five types of asset have interlinked between and among them. Social and economic condition of the people is the outcome of the inter linkage at the household level. It is issue to explore that can all the capital

presented above contributes through community forest? Is the natural capital enhanced through FUG activities and fund mobilization and income generating activities? Can the FUG institution support to enhance the human capital through skill development activities like education and health facilities?

These are some issues in community forestry. Which is also specific objectives of this study .All this review gave concept for the study, which is presented in conceptual frame work in the study.

CHAPTER 3

RESEARCH METHODS

3.1 Rationale for the Site Selection

This study was conducted in Lalitpur District where Central Department of Sociology and Anthropology, Tribhuvan University and others non-governmental organizations were collaboratively involve 'Poverty Reduction through Innovation' program. The project was financially supported by DFID. The project was launched in 25 community forests of Lalitpur district. Under this project, research component was the part of CDSA. Under this section, the project was funded me to carry out this research.

Out of 25 CF, I selected Lamatar and Khaltey community forest users groups of Lalitpur district for the detailed study. There are several reasons behind the selection of these two sites. Firstly, the sites were heterogeneous community in term of caste/ethnic composition. Lamatar was mixed community in terms of caste and ethnicity but predominantly occupied by high caste group whereas Khaltey was homogeneous community inhabited by Tamang. Secondly the economic condition was also varied among these two villages. In Lamatar the landholding size was small but high productive land, and economically highly valuable land as compared with Khaltey villages. In terms of livestock these two villages were quite different. Thirdly, there were variations to the access to development infrastructure (hospital, school, and educational institutes) as well as opportunities provided by market to these two communities. Lastly, access to government and non-government organization was also varied among these two villages. Therefore these two sites were suitable for the researcher to identify the assets held by two different communities.

Among these two villages, community forest programme was already initiated. In Lamatar there was Padali Community Forest and in Khaltey there was Mahila Hariyali Community Forest. These CFs were conducting different income generating activities programs to uplift the livelihood of local peoples. In this context these sites were appropriate to find out the impact of CF on livelihood of CFUGs. Moreover the natural capital of these two CFs was varied such as the coverage of Mahila Hariyali Community Forest was higher as compared to Padali Community Forest in terms of users group household i.e., more than two hector per household in MHCF and less than half hector per household in PCF. Thus the site was suitable to examine the relation between natural capital of CF and its contribution on the livelihood of CFUGs in two CFs.

3.2 Entry in to the Lamatar and Bishankunarayan

As I already mention that I conducted this research in two villages of Lalitpur district located in Lamatar and Bishankunarayan Village Development Committees. Before starting my field work, my supervisor Prof. Ram Bahadur Chhetri advised me to meet Mr. Rajaram Poudel. According to his advised, I went to Lamatar on April 17, 2011. I had to ask villagers for his address as it was wheat harvesting time. I finally get to meet him at his field. Mr. Poudel made provision for my stay.

Immediately, I started visiting community forest of Lamatar. I met Mr. Kedar Pokhrel on the ground of primary school. This had closed down due to lack of student. He said 'Padali community Forest' was previously *birta* of Pokhrel which was later nationalized. He also informed that after formation of CFs, there has been substantial decline in cutting down of trees. The topic of my research was IGA (income generating activities) of CFs and its impact on livelihood of FUG. Mr. Rajaram Poudel gave me valuable information regarding Padali CF as well as others. I also found

out there are various NGOs & INGOs have conducted various training programme like production of 'Brikaid', 'Pickle making' and training related to Agriculture, livestock. But continuity of these activities has been a real challenge for this FUG.

It was also found that most of the villagers travel outside the Lamatar for business purpose and were seen least concerned about the Forest.

After, five days stay in Lamatar. I thought, I should interact with other marginalised poor people .Mr Rajaram may be the valuable informant from the point of NGO/INGOs and other organization but not from anthropological point of view. Then I went *Lakure Bhangyang* situated north of Lamatar. I met few local youth there. With one of them, I went Hariyali Community Forest of Bishankunarayan Village Development Committee. On the way one old man who was grazing his goat in the forest said that as community forest well producing '*Brikaid*'. This was used for fuel. Chairperson Sitaram Tamang informed me that they got training from ICIMOD. Depending upon the geographical location infrastructural facilities and access to resources household of Mahila Hariyali Community Forest has faced greater hardship in earning their livelihood than Padali Community Forest.

3.3 Universe

There are 11 CFUGs in Lamatar and 14 in Bishankunarayan. I purposively selected two CFUGs from 25 CFUGs one from Lamatar and another from Bishankunarayan. Firstly, I met Rajaram Poudel, we know in detailed about the socio-cultural and economic aspects of the users as well as the condition of the forest in the surroundings. In informal talking with him at Dhugin market of Lamatar and got general overview about socio-cultural and economic condition of the villages, and selected PCF

from Lamatar and MHCF from Bishankhunarayan. There were 88 households in PCF and 17 in MHCF. Due to larger household size in PCF, 42.04 % i.e., 37 households were selected. Considering the caste and ethnic composition of the village, I selected 11 households from Brahmin, 14 from Chhetri, 6 from Newar, 4 from dalit and 2 from dalit. In the case of MHCF, I was selected all households due to small CFUGs household size and I did not collect information from one household because I did not get the members when I visited to the house for household survey.

To get detailed information about my research questions I selected 17 (10 males and 7 females) as a key informants. Out of 17, I interviewed with 7 respondents (4 males and 3 females) in Khaltey village and with 10 respondents (6 males and 4 females) from Lamatar village.

3.4 Tools and Technique for data Collection

3.4.1 Household Survey

Household survey was conducted among selected Household of PCF and all Household from MHCF. It was conducted to collect information about socio-demographic information (such as age, sex, education, caste and ethnic composition), economic data (like occupation, land holding, crop yield, and number of livestock). Some respondent literate but large numbers were illiterate. Therefore, I filled the responses myself in presence of respondents. In some household denied giving information about their socio-demographic information to me because such kinds of information (name, age, sex, marital status, education economy etc.) had already collected by the government and non-government organizations many times. Female respondents questioned to me why you needed all these information again? This clearly indicates that the government and

non-government organizations only collect the information from the villagers but do nothing for them at all. That makes the problem for academic research to get information from the rural villages as I faced during my household survey.

Moreover, the household survey not only helpful for me to get socio-demographic and economic information about Khaltey and Lamatar villagers but also helped me to familiarize with community members and made me easier to collect other information related to livelihood.

3.4.2 Interview

In this research, I used semi-structured interview with key informants who were identified during my household survey as well as informal discussion with the villagers during my stay at the research sites. The informants were ex and current committee members, members of forest users groups, forest watchmen and members of religious institutions, development workers in Lalitpur district. I collected information about the situations of forest and forest products, forest management system, contribution of CF in the livelihood to villagers, illegal extraction of forest, religious and cultural values of local plants in the life of villagers.

Moreover, I intensively talked with the forest users about the condition of forest and forest product, contribution of CF on their livelihood, access to forest product, access to training and organization, access to fund and information, income generating activities carried out by CF, change in livelihood of the users, economy of village, types of assets and its contribution to the livelihood of the villagers.

During my stay at field work, I conducted interview in formal and informal way. Here formal means, I got their time before conducting interview with the respondent and most of the time I conducted interview with key informant informally. Interviews were conducted at the respondent's own homes, tea stalls, working places (agricultural field) and public setting place locally called *chautara*. During my interview, I met the female respondents at their home or working places because they were found busy in their household tasks and agricultural tasks and conducted interview with male at tea stalls and *chautara*. Interesting events associated with my objectives which I collected from interview were presented in the form of case in the thesis.

3.4.3 Observation

I had got some information about social setting, physical setting of study area from Rajaram Poudel and Sitaram Tamang. But such information may not be sufficient anthropological study. Therefore, I also observed the social and physical settings of the area during my field work. I was one meeting of each CF, and one meeting of co-operative at Lamatar. During research I found they would like to hear few words from me about community forest. In such meeting most of member expressed their view openly. This helped me to understand function of community organization. I took photograph of “*Brikaid*” produced by Mahila Hariyali Community Forest.

As per my objectives, I observed the physical capital (e.g. school, health post, and roads), natural capital (forest product, grazing, and condition of land), financial capital (saving, credit), human capital (education, skills), and social capital (social relation, institution and organization). In addition to the capitals, I also observed the settlement patterns of two

villages, available forest and water resources, institutions and organizations and livelihood strategies.

3.4.4 Data Presentation and Analysis

The task of analysis is to bring order out of the chaos of your notes, to pick out the central themes of your study and to carry them across to your written work (Baker, 1999). Therefore, qualitative data were analyzed and interpreted descriptively. It was coded and classified into descriptive and numerical character. The quantitative data were presented in various tables and simple statistical method such as mean in the percentage. After presentation of the data in the tables they were analyzed and interpreted coherently. All these data were processed with the help of computer. Throughout the thesis assets/process/activities framework has been accepted as a guideline. Therefore, the perspectives influenced data analysis.

3.5 Limitations

The limitation of this study lies on the fact that it was carried out only in FUGs of Padali and Mahila Hariyali community forest. It poses the limitation in understanding the other Forest Users Group in Nepal as whole. Therefore, the conclusion and generalization reached from the study would be applicable only in similar situation. This research is based on 'assets/ process/ activities' framework if the other researcher used another theoretical framework the result may be different.

CHAPTER 4

THE AREA AND PEOPLE UNDER STUDY

This chapter discusses about the area and the people under the study. The first part of the thesis deals about the physical setting (climate, flora and fauna, water resources, land) and second part discusses about the social settings of the site like settlement pattern, social composition and village economy.

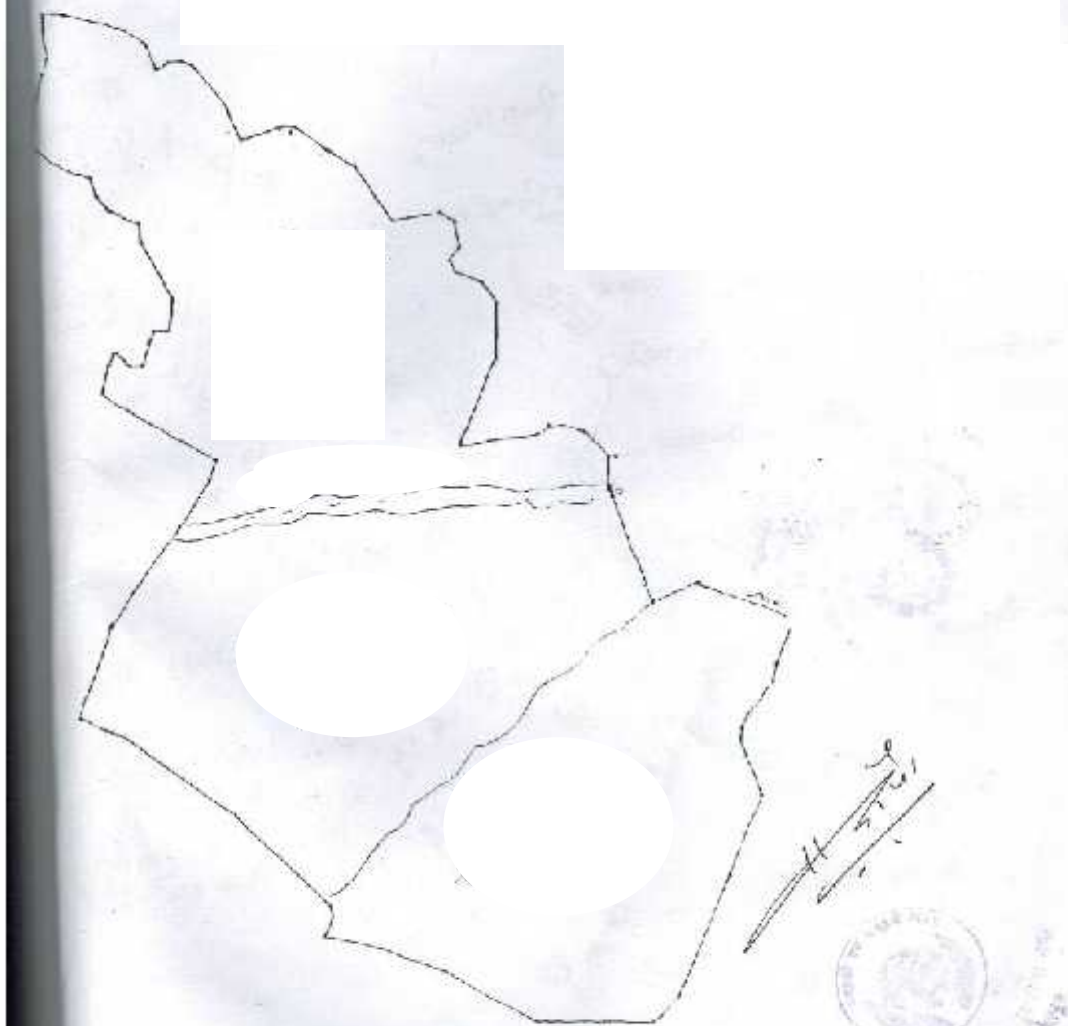
4.1 Physical Setting

Lamatar and Bishankhunarayan are located in the east-southern part of the Lalitpur district. It is about 10 km. far from the Headquarter of the district. In another words, it is situated in the southern broader of the Kathmandu valley. The Lamatar village is located in the bottom of the Lakuribhanjyang and Khaltey is at the top of the Lakhuribhanjyang. The area has a sub-tropical and temperate climate. Due to located in the sub-tropical climate, the available vegetation was similar but water resources were not good in Khaltey. Moreover, the access to market, government and non-government organizations was better in Lamatar than Khaltey. Similarly, educational institution, health related institution, transportation facilities were better in Lamatar than Khaltey which directly and indirectly affects the livelihood of the local people which I will discuss in the chapter five.

4.2 Climate

The respondents informed me that the climate of these areas was hot in summer and winter was cold and foggy. The meteorological data also shows that the maximum annual temperature reaches up to 30°C in summer and minimum temperature comes down up to 5°C in the winter season. In summer seasons, the rainfall generally begin from June and

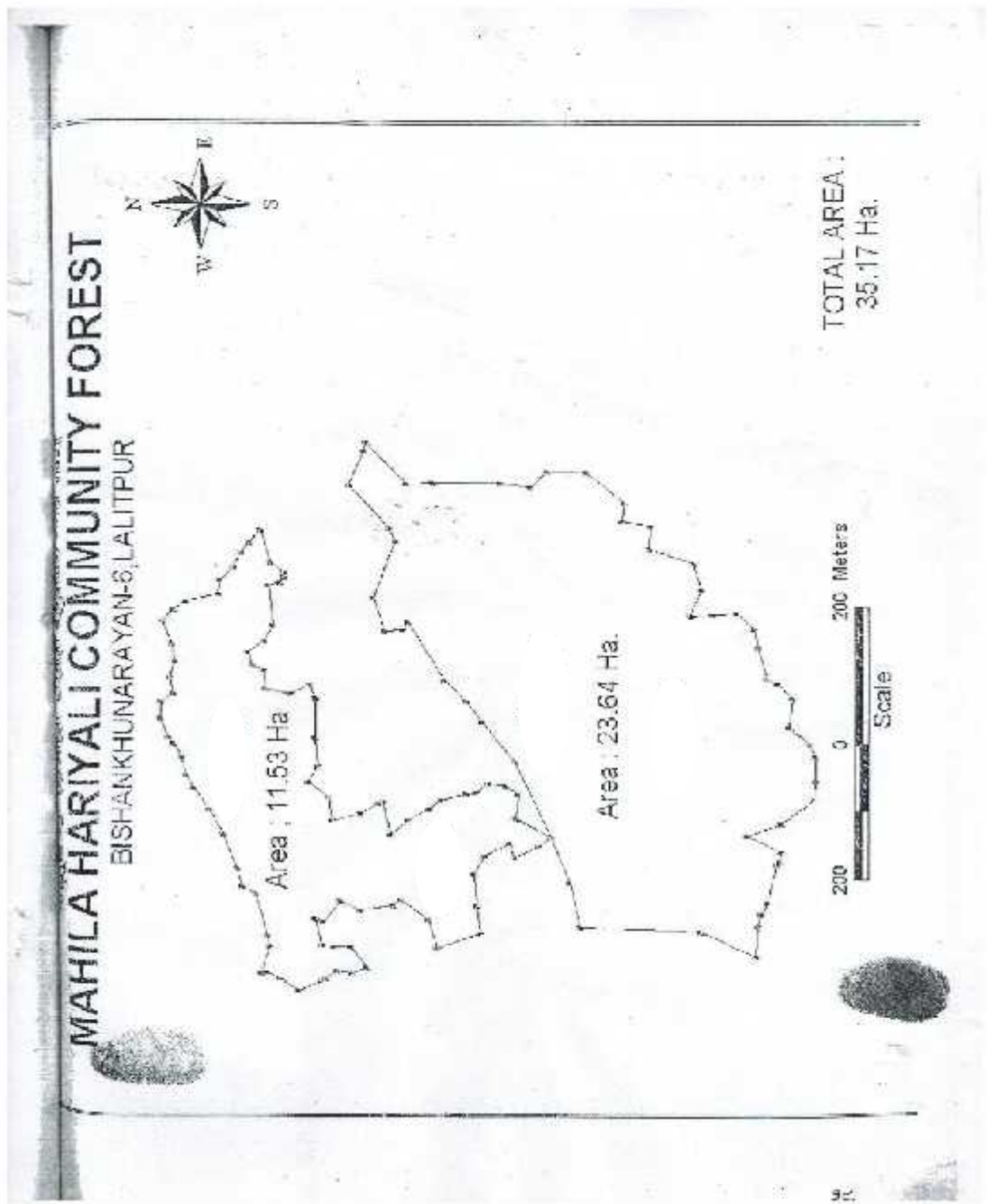
Padali Community Forest



Area : 46 hect
Scale : 1:400 (1 cm= 40 m)

Reduro - 0%

Map-1



Map-2

remained to September which is essential for them for their livelihood because villagers depended on rain-fed agriculture in summer. In winter, very little rain was fall in the area which was useful for winter crops such as wheat and green vegetables and maize plantation in March and April. But the respondents informed me that the climate of the area was changed as compared to the past. The rainfall was erratic and untimely, summer is going to hotter and foggy days in winter were thick as compared to past.

4.3 Natural Resources

In the study area, the respondents perceived natural resources are essential for their survival and well beings. The local people categorized the natural resources into two categories - renewal (forest and water) and non-renewable (land, soil, stone, gravel).

4.3.1 Flora and Fauna

Padali and Hariyali community forestry is rich in bio-diversity. It shelters different kinds of wild animals, birds, reptiles, insects, and plants. Major species of the forest were *Alnus nepalensis* (Utis), *Schima wallichii* (Chhilaune), *Pinus roxburghi* (Pine), which was commonly used for timber for the construction of house, cow shed, construction of school, construction of shed for fire wood storage, firewood for fuel, making agricultural tools like plough. *Katus* was used for firewood. In the field observation it was found that Khaltey villagers were collected *Kafal* from their forest and sell it in market. *Lapsi* was also found in the study area it was used for pickle. Several kinds of colorful flowers *Laligurash* shrubs, creepers and grasses are also available in the area were also used for fodder and leaf-litter during the winter season for the protection of cold to their livestock. Moreover villagers also informed me that leaf-litter were the valuable and effective source of manure.

Similarly wild animals like fox, Jackal, deer, rabbit, porcupine, and leopard were also found in forest. The respondents informed me that sometimes these wild animals like deer, rabbit destroyed crops like wheat, maize, and millet. Animal like leopard, jackal, and fox killed their domestic animals like goat, calf, chicken etc. Therefore villagers also killed these wild animals if possible.

People use herbs and medicinal plants that are locally available in the forest in the treatment of different diseases and illness, Informants, especially the more elderly, were informed not only as to what herbs and plant to use, but also how to prepare them and at stages during an illness to use them. In compares between two villages, Khaltey villagers mostly used herbal medicine for treatment than Lamatar. The Lamatar villagers have well access to modern medicine as well as hospital as compare to Khaltey. When I discussed with a *Bombo* at Khaltey he informed me that villagers came to his home for remedy of illness while they feel ill. When I was talking with him during my field study a woman, Sita Tamang (26) came to *Bombo* house for curing stomach pain. She was suffering from the disease since last year. She also informed me that her problem was improved after taking medicine from *Bombo*. This clearly indicates that Buddhist tantric also contribute to the health of Tamang people. Moreover the ways of living, health problem and health care of Tamang people at Khaltey are interwoven in the daily life of the people.

According to *Bombo*, he commonly used guava leaves (*ambako pat*) and roots in powdered form, and mountain ebony (*koiralo*) for indigestion; a decoction of ginger (*aduwa*), garlic (*lasun*), turmeric (*besar*) and slat (*nun*) for colds; *adhatoda vasica* (*asuro*) for fevers and cough; golden raspberry (*aiselu*) for wounds from cuts; jasmine (*jai*) for sore throats;

barberry (chutro) and wildcherry (paiyu) for worms; sugarcane for jundice, and so on and so forth.

In the study area, I found that both Hindu and Tamang rituals require a wide range of use of plants in appeasing their deities. The symbolic uses of plants during ceremonies were found in various rituals organized within the community. The rituals organized during the honor of the village goddess are some of the religious ceremonies in Khaltey village where Musurey Katus (*Castanopsis tribuloides*) was used. Titepaty (*Artemesia vulgaris*) was considered as important plant for making incense for purifying and appeasing the deities and used during the death rituals. Dubo (*Cynodorn sps*) was regarded as a symbol of longitivity and used in birth and marriage ceremony in Lamatar. Similarly, Bar (*Ficus bengalensis*) and Pipal (*Ficus religiosa*) were regarded as holy trees.

4.3.2 Water and Water Resources

In my observation in the study areas, I found many torrential streams and springs which were the main source of water for the villagers. Both villages had the facilities of drinking water but in Khaltey there was no irrigated land it was because of area was stiff. Lamatar had facility of irrigation because many torrent streams were there and was situated in the bottom of hill.

4.3.3 Land and Soil

Land was one of the major natural resource and a main property of this area. The land of Lamatar was suitable for vegetables, fruits farming soil texture was productive but the land of Khaltey was not productive color of soil was red. The villagers categorized the land in to *Khet* and *Bari*.

Bari was near from home. *Khet* was far from settlement area specially used for growing paddy, wheat and maize.

4.4 People and Settlement Pattern

The settlement pattern of Lamatar and Khaltey villages was found quite different. It may be due to geographical localities, cultural practices, land holding size, access to market etc. In the case of Lamatar, the settlement was in cluster meaning HHs were more or less attached to each other due to flat land, small landholding size of HHs, attached to local market. In Khaltey, the houses were scattered in wider geographical area as compare to Lamatar due to cliff land and large land holding size.

The composition of people in two settlements was varied. Lamatar was mixed community whereas Khaltey was single community. However, the CBS 2001 report presented the caste and ethnic composition of the settlement. The table presents the caste and ethnic composition of the people in the two VDCs of Lalitpur district.

Table 2: Distribution of Population by Caste/ethnicity in Two VDCs

| Caste/ethnicity | Lamatar | | Bishankunarayan | |
|--------------------|---------|-------|-----------------|-------|
| | No. | % | No. | % |
| Chhetri | 2246 | 27.08 | 2518 | 55.63 |
| Brahmin | 2097 | 25.28 | 141 | 3.11 |
| Tamang | 1152 | 13.89 | 697 | 15.39 |
| Newar | 1085 | 13.08 | 129 | 2.85 |
| Sarki | 297 | 3.58 | 303 | 6.69 |
| Magar | 159 | 1.91 | 204 | 4.50 |
| Damai | 138 | 1.66 | 91 | 2.01 |
| Thakuri | 105 | 1.26 | 10 | 0.22 |
| Gharti | 102 | 1.22 | 17 | 0.37 |
| Kami | 749 | 9.03 | 119 | 2.62 |
| Gurung | 36 | 0.43 | 13 | 0.28 |
| Sanyasi | 31 | 0.37 | 229 | 5.05 |
| Rai | 26 | 0.31 | - | - |
| Tharu | 17 | 0.20 | - | - |
| Muslim | 14 | 0.16 | - | - |
| Baniya | 9 | 0.10 | - | - |
| Yadav | 9 | 0.10 | - | - |
| Rajbhandari | 6 | 0.07 | - | - |
| Paswan | - | - | 8 | 0.17 |
| Unidentified Dalit | - | - | 32 | 0.70 |
| Others | 15 | 0.18 | 15 | 0.33 |
| Total | 8293 | | 4526 | |

Source: CBS, 2001

The data presented in the table clearly indicated that both VDCs were heterogeneous in terms of caste and ethnic composition. In Lamatar, four

caste and ethnic groups hold the major proportion of the total population whereas in Bishankhunarayan Chhetri seems as the major group. However, the social data from the Khaltey shows that the all household were Tamang people. It clearly shows that a specific group of people have a separate settlement in the study area. That means same caste and ethnic groups of people like to live in a separately.

4.5 Village Economy

4.5.1 Khaltey Village

The village economy of Mahila Community Forestry is mainly based on subsistence agriculture and animal husbandry with close connection to forest resources. Forest resources were essential to the livelihood of the Tamang. They used fuel for cooking and warmth in winter season, lumber for roofing, floor planks and households timbers and raw material for the whole array of household and farm tools come from the extensive forest area within khalte borders .In addition to the natural resources of the area must have its disposal livestock, agriculture tools and a variety of household articles to enable its member to sustain their livelihood. Apart from Agriculture the most important part of Tamang adaptation is pastoral economy. A significant part of household's capital was bound up with livestock. Unlike the land, the value of livestock fluctuates from year to year and even between seasons. For example, Sitaram Tamang informed me that the villagers lost several goats due to disease in the year 2007. Moreover Rana bahadur Tamang lost a buffalo in 2010. According to him he had tied his buffalo in the shed at night but could not found it in the morning.

There were more buffaloes than cattle among the Tamang people. Buffalo was the source of milk and milk related products. They consumed these

products for their own use. They slaughtered the male in religious occasion as well as festival. Similarly when female buffalo stopped reproduction than they also slaughtered it. Villagers informed me that buffaloes produced large quantity of manure as compare to cattle. The skin of buffaloes was used in making agricultural implements to pull plough called *Halauta*.

Similarly, the villagers kept cow for different purposes like milk and milk products, ox production and manure. Oxen were used only for traction. As Hindu people, the Tamang did not slaughter cow and ox. A respondent informed me that they eat cattle when they fall from the steep slopes. Goat and chicken were used for meat, offering god and goddess, they offer goat, chicken blood to make god happy and for warm felicitation of guest animals meant were used.

In addition to livestock rising, the Tamang villagers of Khaltey also depended on agriculture for their livelihood. They grow paddy, wheat, potatoes, and maize. Among these products, maize was the staple cereal crops grown in the village due to steep and unirrigated cultivated land.

Likewise, villagers produced small quantity of paddy in the bottom of village where there was a facility of irrigation as well as terrace land. In winter season they planted wheat in irrigated land. In the field observation it was found that only 43.75% HHs had irrigated land which also influences the livelihood of the villagers.

The main economic strategies of the villagers were wage labour. The young people generally came to Kathmandu for wage labor. In the study area only two people (one male and one female) were found to involve in

service i.e. a woman in local school as a teacher and a man in reputed INGO as security guard.

In the field observation it was found that villager made handy craft such as *nanglo* (winnowing tryas), *doko* (bamboo basket), *mandro* (bamboo mattress), *ghum* from bamboo for their own use. Sometimes they sold these items within their community or outside the village. It was found that elderly male were involving for making bamboo related handy craft. Local brew making was also the major adaptive strategies of the villagers.

4.5.2 Lamatar Village

Village economy of the Lamatar was mainly based on the subsistence agriculture. While the pastoral and wage labor portions of the economy were able to provide supplementary foods, the day-to-day food requirements of these villagers were almost entirely dependent on what they grow in their field. Major populations were Brahmins. They earned their livelihood as priest in other village and in *Bazzar*. Selling milk product in *Bazzar* and also works in offices. Land was major unit of production in Lamatar as elsewhere in Nepal. Brahmins own great deal of land because they were educated and also had access to government organization. The availability of land to other groups (lower castes) was very less. Establishment of school, expansion of road, had also provided new opportunities and increased the demand of skilled manpower in Lamatar. Higher caste was more involved in government services and in trade because of their education and qualification. In contrast low castes were found unskilled and had to spend their low wage to make up grain deficit, not on improving their standard of living. Lack of access to land and low wage from unskilled labor was not able fulfill their basic needs and they were obliged to go to Kathmandu for employment.

CHAPTER 5

SOCIO-ECONOMIC SITUATION OF FOREST USER GROUPS

This chapter deals with the socio-economic situation with respect to five capitals or assets of sampled FUGs households. There are many socio economic variables, but only some variables are described here which are related to this research. The variables like family size, caste ethnicity of the respondent, five capital assets; natural, physical, financial, social, and human capitals such as landholding, livestock owned, households income, access to school and drinking water, education status of the household member, gender representation in the forest operation and participation in meeting are important variables for the interpretation of the result in the following chapter.

5.1 Community Forestry and Availability of Assets

There are altogether 175 Community Forest User Groups in Lalitpur district. The total area of community forest handed over to local communities is 9839 hector from which 30363 households are taking benefit from community forest. District forest office Lalitpur has started to handover forest area since 2045 B.S. The forest resources fall under District Forest Office Lalitpur which administers community Forest Management activities in areas. This research was conducted in Padali Community Forest (Lamatar) and Mahila Hariyali community Forest (Khaltey).

5.1.1 Social Capital

Social capital refers to the social networks and association in which people participate and from which they derived support that contribute to their livelihoods. During my field work, it was found that outsiders or

non-government organizations and government organizations visited to the Padali CF and met the executive members. Similarly, the members of Padali CF frequently visited to the forest related organizations and gained information about the forest related activities and ongoing activities of the organization. On the other hand, very few staffs or members of government and non-government organizations visited to the Mahila Hariyali CF due to located in the far distance as compare to Padali CF. In the household survey, I found that the low literacy rate of MHCF was lower as compared to PCF i.e., 17.64% and 61.11% respectively. The PCF were able to use their literacy to make good social network with organizations as compared to MHCF. In this regards, a key informant at Khaltey said “*hami bikashe ra samrakhan sastha ko bhasha bhudainau*” meaning we do not understand the language of development and conservation related organizations. This clearly indicates that the illiterate people wanted to establish the social network out the organizations and institutions working in the field of rural community but the language or education seems as the main barrier for them. Thus, the data clearly shows that the social capital of PCF is better and effective than MHCF in the study areas.

5.1.2 Family Size

Economic organization through kinship must take us back to the household development cycle as the set of labor and exchange relationship extends outwards from the hearth. Family and household composition must affect the nature of the domestic economy. As a household moves through its development cycle, it changes from a unit whose primary exchange relationships are directed towards other unit-owing labor to the wife’s natal households and being more likely to assist the husband’s father’s household at tasks than to be assisted. As a

household matures, however, and some of its own members pod off into other units, it too becomes the focus of an expanding network of kin links through which it can command the labor of others. Changes in productive relation are two types: (1) those that occur within the household itself as its members mature and become productive and (2) those that expand its network of kin-based links with other households. In both cases, the strength of a domestic production unit is based on the number of offspring a couple can bear.

Family size has important value in change of the livelihood of Forest User Groups, if they have sufficient members in their family they are more likely to do well in economic activities .The table 2 shows the size of the family in the Village.

Table 3: Distribution of Family by its Size

| Family size | Number (PCFUGs) | % | Number (MHCFUGs) | % |
|-------------|--------------------|-------|---------------------|------|
| 1-3 | 9 | 24.32 | 2 | 12.5 |
| 4-6 | 23 | 62.16 | 6 | 37.5 |
| 7-9 | 5 | 13.51 | 8 | 50 |
| Total | 37 | 100 | 16 | 100 |

Source: Field Survey, 2011

The table 3 shows that there was a variation in family size system in Padali and Mahila Hariyali CF. In comparison to Padali, there was a higher family size in Mahila Hariyali CF. Fricke (1987) mentioned in Tamang demography and domestic process size of the family was taken as household production and it related to the economic activities Khaltey

village was also inhabited by majority of Tamang community people joined together to work within household without keeping accounts. Landholding size was moreover greater than Lamatar. When they separated from the family they got only little chunk of land and also deprived from labour exchange. So people of Khaltey had larger family size. People of Lamatar were educated; they were not totally depending on land for livelihood so there was no matter of labour. They had good access to government and non-government organization. All these, made them prefer nuclear family.

5.1.3 Religion

Hindu religion and rituals is taken as a way of life of the people of Lamatar, The village was highly influenced by the value, norms, culture, morals and rituals of Hindu culture. The people of Lamatar believe that the door of heaven will be kept open who do lots of *Dan*, *Dharma*, *Jap*, *Tap* and social work in this *juni* (Life-Period). It shows that they had strong belief on *punnarjanma* (rebirth). Hindus believe that under certain circumstances and individual souls, (*Atma*) can attain *mukti* from *sansar* in to transcendent reality.

For the continuity of lineage they have strong desires of son. Hindu society is the patriarchal so in every institution and culture male has higher place than female. Khaltey religious life shares some mixture of Tibetan Buddhist (Nyingmpa Tibetan; old sect) and animistic elements were throughout the Tamang area. The Tamang rituals calendar meshes with the yearly agriculture and pastoral cycle. Significant rituals include the blessing of the field by the Lamas who circumambulate the village terraces before the spring planting. Bombo looks for cure to the sick and specialize in propitiating local forest deities that can cause injury to

Tamang villagers and their herds. The population of the study area is divided into various groups according to religious background. The table 4 shows the religious composition in the study area.

Table 4: Religious Distribution of the Population

| Caste/Ethnic Groups | Hindu PCFUGs | % | Christian (%) PCFUGs | % | Buddhist (%) HCFUGs | % |
|----------------------------|---------------------|----------|-----------------------------|----------|----------------------------|----------|
| Brahmin | 10 | 27.02 | - | - | - | - |
| Chhetri | 14 | 37.83 | - | - | - | - |
| Newar | 6 | 16.21 | 1 | 2.70 | - | - |
| Magar | 2 | 5.40 | - | - | - | - |
| Dalit | 4 | 10.81 | - | - | - | - |
| Tamang | - | - | - | - | 16 | 94.11 |

Field: Survey, 2011

The above Table 4 shows that in Padali CF there are more people of Hindu religion. Number of HHs was Chhetri and Brahmin. Whereas in Hariyali CF all HHs are in Buddhist religion and all the HHs were Tamang.

5.1.4 Natural Capital – Land and Landholding Size

Natural capital refers to the natural resource base (land, water, trees) that yields product utilized by human population for their survival. There was a different landholding size in two studied villages. The land of Khaltey was less productive as compared with Lamatar. The colors of soil were red and black in Khaltey and Lamatar respectively. According to the respondent, the red soil was less productive than black soil. Land of Lamatar was more valuable than Khaltey because it had good access to

road. There was also the facility of irrigation such facility was not seen in Khaltey. Moreover the land of Khaltey was cliff and soil texture was less productive and whereas land of Lamatar was flat. The respondent informed me that land was the main source of livelihood in the studied population. They considered land as the permanent source of survival for generations in this area, major source of survival support has been the cultivation of crop in the farmlands. It was found that some of households were landless and other have big chunk of land.

Table 5: Landholding Size in the Study CFUGs.

| Area in Ropani | Households of (PCFUGs) | Percentage | Households of (MHCFUGs) | Percentage |
|-----------------------|-------------------------------|-------------------|--------------------------------|-------------------|
| Land less | 0 | - | 3 | 18.75 |
| <3 | 34 | 91.89 | 1 | 6.25 |
| 3-5 | 3 | 8.10 | 2 | 12.5 |
| 6-10 | - | - | 3 | 18.75 |
| 11-15 | - | - | 4 | 25 |
| 16< | - | - | 3 | 18.75 |
| Total | 37 | 100 | 16 | 100 |

Source: Field Survey, 2011

The table 5 shows that there was variation of landholding size between Khaltey and Lamatar village. In comparison to the Lamatar people of Khaltey holding greater size of land but their land was less valuable.

Although people of Khaltey holding greater size of land they were not able to provide the food for whole year because their land was less productive and people were involved in non-agriculture activities such as

labour in road construction. On the other hand land of Lamatar was more valuable. It was also the more productive. My data shows that although people have small chunk of land in Lamatar they were not depend on the Forest resources for their Livelihood. It was because of they had many other option for livelihood they can easily go to Kathmandu for work. It was not seen in Khaltey although they had greater land they were totally depend upon the Forest resources for their Livelihood.

5.1.5 Physical Capital

Physical assets considered in the study area were access to the drinking water, access to school (primary and high school), access to hospital, market.

5.1.5.1 Access to Drinking Water

An informant informed me that, villagers had access to drinking water both in Lamatar and Khaltey village. But in Khaltey villagers had no access to high school education only one primary school situated in the middle of the village. People had to travel 2 hrs, for high school. Whereas in Lamatar villagers have good access to education Suvatara School was in their village and villagers can send their children at reputed school in Kathmandu because of good access to road. Informant of Khaltey informed me that there was no any health center in their village they had to travel long way for this facility. But in Lamatar villagers had good access to such health center. In comparison of two villages it was found that Lamatar was in near of Kathmandu so opportunity of wage labour, job was maximum villagers were selling their local product vegetables, milk in Dhungin (local market). Although coverage of forest in Khaltey and Padali were increasing but due Geographical condition irrigated land

was not seen in Khaltey. Both villages had accessed to drinking water. Irrigated land was seen only in Lamatar village.

Table 6: Access to Drinking Water in PCFUGs and MHCFUGs

| Water sources | PCFUGs | % | MHCFUGs | % |
|----------------------|---------------|----------|----------------|----------|
| Natural source | 4 | 10.81 | 3 | 18.75 |
| Community tap | 4 | 10.81 | 6 | 37.5 |
| Private tap | 29 | 78.37 | 7 | 43.75 |
| Total | 37 | 100 | 16 | 100 |

Source: Field Survey, 2011

5.1.6 Financial Capital

Financial capital refers to stock of cash that can be accessed in order to purchase either production or consuming goods, and access to credit might be including in this categories.

5.1.6.1 Household Income

Lamatar is inhabited by Brahmin, Chhetri, Newar, Magar and Dalit castes (i.e Damai, Kami, and Sarki). On the other hand khaltey is inhabited by Tamang .It was evident from the field that most of the households in the study area seem to have adopted multiple livelihood earning strategies just as the people do in other part of the country. As we can see from the data presented in the Table 7, 45.94%, had been involve in Business. There has been number of business shop-keeping in Padali CF. Service or employment in different institution or organization is new phenomenon for Padali inhabitant. On the other hand in Hariyali CF 43.75% households were unable to provide food for the whole year by their own agriculture production because of the small size of their land, lack of irrigation facilities and big size of family. Similarly, I found that getting permanent employment almost impossible to Tamang community of MHCF due to low level of educational status. The Tamang have only an

unskilled work- force to offer and they were depending upon Forest resources for their livelihood. Some were involving in *brikaid* making, some were *kafal* collection.

Table 7: Major Sources of Income (cash) in Sampled HHs

| Main Occupation | No of HHs (Padali CF) | Percentage | No of HHs (Hariyali CF) | Percentage |
|------------------------|------------------------------|-------------------|--------------------------------|-------------------|
| Agriculture | 6 | 16.21 | 5 | 31.25 |
| Wage Labor | 4 | 10.81 | 7 | 43.75 |
| Employment | 10 | 27.02 | 2 | 12.5 |
| Business | 17 | 45.94 | 2 | 12.5 |
| Total | 37 | 100 | 16 | 100 |

Source: Field Survey, 2011

5.1.6.2 Livestock holding in FUGs

Animal husbandry is a component of no minor importance for household subsistence than agriculture and the two are closely interlinked. Traditionally, animal dung and traction were most significant inputs in to agriculture. Today animal dung is still an important fertilizer to increase the crop production. Cows are kept for milk and goats are raised for meat, as an according to the Hinduism it is considered to blasphemous to drink animal milk and eat the same animals meat. Besides, most non-Brahmin households keep chicken for egg and meat and ethnic groups Tamang, Gurung and so called low cast Sarki also rear pig. A fairly recent development in animal husbandry is the increasing importance of dairy cattle due to the extended market facilities. The extension of national infrastructure in terms of road networks has brought the Lamatar closer to Kathmandu which opened new market opportunities, especially dairy production when a milk collection center was opened in Dhungin, Lamatar in 2010.

In MHCF the average numbers of livestock like buffaloes, cattle and goats in the household were found higher than PCF (see Table: 8). According to Molnar cultural attitude to other forms of animal husbandry; the choice of raising pigs and buffaloes seems to influenced largely by prevailing cultural attitudes. Animal husbandry is taken as prestigiously in Tamang community. People in Khaltey were found keeping more buffaloes this was because of religious belief in Tamang buffaloes were slaughtered in rituals and feast. Similar to Timling study by Fricke (1993) it was found that yielding of buffaloes, goats, cows has significant raised in Lamatar in relation to other cattle. There was no excess grazing land in Lamatar than khaltey village so number of livestock is higher in Khaltey than Lamatar (see table: 8). Livestock numbers by type owned by Sample Households in the study sites

Table 8: Livestock Holding in FUGs

| Livestock | PCFUGs | HCFUGs | Total |
|------------------|---------------|---------------|--------------|
| Buffaloes | 2 | 13 | 15 |
| Cow | 11 | 8 | 19 |
| Goats | 11 | 62 | 73 |
| Chickens | 24 | 30 | 54 |
| Pigs | 3 | - | - |
| Total | 51 | 113 | 164 |

Source: Field Survey, 2011

The data presented in table 8 clearly indicates that the total number of goat and cattle owned by household was higher in MHCFUGs than PCFUGs. Goats and buffaloes were predominant the livestock population in MHCF. To give more priority to buffaloes in Tamang community was

buffaloes have material values for them. The milking buffaloes kept for dairy products and after stop to give milk they slaughter and eat its meat in feast and festival. On the other had in PCF been inhabited mainly by Brahmin, and Chhetri. They were using the forest grazing goats. Households with animals at pasture need to have one member permanently tending the herd. This is a simple job, often entrusted to the less productive members of the household, e.g. children and old people. In the study area, I found that cow and buffaloes often did not graze them in pasture land like forest. They were stalled feed and member of CF could collect the fodder.

In the study area, I found that non-government organization was supported to the villager at MHCFUGs to improve their livelihood through livestock. However, the program was found not effective and successful in the study area. This is presented by the illustration said by a woman who got some goats form the organization to support her livelihood.

CASE 1: How the Top-down Approach Failure to Improve the Livelihood of Local People

One of the member of 'Mahila Hariyali CF' Mahili Tamang said *Samuha bata ta ma khasi bakhra kahe laudina sabai marcha (I do not take goats given by organization as it died easily) .*

During the research it was found that around 10 years ago one organization called "SEED" distributed goat and buffaloes to the family who sent their children to school. They distributed (50 to 60) goats and (15 to 20) buffaloes. Unfortunately all the goats died. Most of the villagers were still raising buffaloes. During research it was found that "SEED" brought these goats from Terai. This was hybrid and can grow fast up to 160 kg. Namely this goat called 'Jamunapri'. It could not adopt at that time in cold environment and died and such belief comes true for Mahili Tamang. All goats were still local in Khaltey village. This case study showed that Khaltey villagers still have such belief. Although forest providing grazing land to Khaltey villagers, they were not planning change the lineage of livestock.

This narrative of women clearly indicates that the development practitioner did not concern to the local people and their micro-ecological knowledge resulting do not success the program i.e., could improve the livelihood of local people through rising of goats.

5.1.7 Human Capital

Human capital refers to the education level and health status of the population from which they can derive support that contribute to their livelihoods.

5.1.7.1 Education Status

It is increasingly becoming a factor in economic strategies. Molnar suggests that education would serve to limit herding as economic strategies since it channels the human resources in to government jobs and other extra-village employment. The respondents were more eager to attain new status\position by educating their children in Lamatar. Those who had already attained higher education were economically better off and more active in educating their children and to improve the educational standard of future generation and elevate the standard of living in the society. The priority to train their children in the traditional occupation was relatively low in the study area. On the other hand, educational attainments enhance their social position and give the more option within the society because education is an important correlates of enhancing socio-economic status in the society. The study area was not far from the Kathmandu, it is in the periphery of valley. Data presented here revealed that the education status of Padli CF seems to be comparatively better than Mahila Hariyali CF. The table 9 shows the education status of Mahila Hariyali Community Forest and Padali Community Forest.

Table 9: Education Status Mahila Hariyali Community Forest and Padali Community Forest User Groups

| Educational Status | Padali | | Mahila Hariyali | | Total |
|--------------------|--------|-------|-----------------|-------|-------|
| | Resp. | % | Resp. | % | |
| Literate | 22 | 59.45 | 3 | 18.75 | 25 |
| Illiterate | 8 | 21.62 | 13 | 81.25 | 21 |
| Higher Education | 7 | 100 | - | - | 7 |

Source: Field Survey, 2011

The total respondents under study 59.45% were literate in Padali CF. Where as 81.25% were illiterate in Hariyali CF. Where the livelihoods are concerned insight from the human ecology suggest that the following factor are fundamentally important to resilience and adaptive capacity; Access to the diverse, independent income sources and income strategies, the general educational and other skills required to respond to constrains and take advantage of diverse income niches as opportunities emerge, support system (information, social network ,community organization, market ,etc.) that allow people to migrate and information resource to flow throw diverse channel. Vulnerable population typically does not score well on evaluation of the above factors. The poor, for example are often dependent on a very narrow set of income opportunities, such as agricultural wage labor. Table: 9 showed that more people illiterate in MHCF which reflected in the some sort of hesitation of people to take part in training program. Especially in training programme they were facing difficulties to understand language. So it would be fruitful if such training programme was given in their own languages.

5.1.7.2 Knowledge System

Knowledge system seems varied between two CFs. My respondent of PCFs Rajaram Poudel had knowledge not only PCF but also about entire CFs of this territory. He could provide each and every information related to CFs. This was not seen in MHCF, one of my respondents Sitaram Tamang he was also the chairman of MHCF. During my first visit I asked him about coverage of CFs. He answered me, it is 17.35 hector. Later when I saw operational plan of MHCF the total forest coverage area was 35.17 hector.

CHAPTER 6

CONTRIBUTIONS OF COMMUNITY FORESTRY IN LIVELIHOOD DIVERSIFICATION

This chapter deals with contribution of community forestry in livelihood diversification, relationship of IGA and livelihood of users groups.

Several projects such as DFID, FECOFUN, and FOREST ACTION have been active in implementing several programme, in the study area for contribution of better livelihood. As a result significant proportion of the population in this area seems to be taking active part in the conservation of natural resources in their respective location. The success stories of CF program become evident that a large proportion of people in this area have already obtained membership in Forest User Groups (FUG). The involvement of local people in CFUGs indicate that the CF programme have gained popularity.

In my study area the livelihood strategies and activities of people is found to be different among various caste/ethnic groups by geographical location. Agriculture, livestock rearing, tourism, trade, off-farm employment (including jobs and labor works) etc. are among the common livelihood strategies adopted by the majority of the people. The economy of the PCFUGs is based mainly on small business supplemented by others incomes which I shall describe later. Whereas in MHCFUGs economy is based mainly on agro- pastoral production and wage labour.

6.1 Relationship of IGA and Livelihood of Users Groups

In Padali CF, until the time of field study, IGA program implemented by the NGOs does not seem to have resulted in real innovative activities. It was found that HHs took part in training after that they stopped to

implement, what they learnt. Many local people found to less interest about CF, as we noted 45.94% people in Padali involved in business (Tea-shop, Grocery). Interesting information which was revealed by local youth in informal interview was that they did not know about CF. It is simple job of old men. Some people had livestock cow and buffaloes for milk. One informant told me that they sell milk in market in order to pay monthly installment of their loan. They invested on various IGA (small tea- shop, vegetables farming, mushroom cultivation).

On the other hand, MHCF, IGA implemented by NGOs seem to have some positive results. Replication of '*Brikaid*' training was seen in Brikaid factories. Since 2010, they have started cardamom plantation collectively. One Japanese organization had provided seedlings of cardamom. As we noted 43.75% people involved in wage labour. Many of them were found to be involved in construction of road in Lakure Bhanjyang. Informal interview reveals that they feel proud to do such hard work. Some people collected '*Kafal*' from the forest and sell it in the market. Especially, people who are illiterate and economically weak were found involved in *Kafal* collection. Most of the families in this area from Tamang community almost the literacy rate was low, but they raised more goats some of them had slaughter house in Godavari.

6.2 IGA program and Its Effect on Livelihood.

Table10: Training Carried Out by PCF and MHCF

| Activities | PCF | MHCF |
|------------|--|--------------------|
| Training | Brikaid, mushroom cultivation, pickal making, duna tapare, craft making vermicomposting, co-operatives, tailoring, agriculture, livestock, ecotourism. | Brikaid, livestock |

Field survey, 2011

Empirical finding revealed that the IGA has implementing in MHCF and shows positive effect on livelihood. Although forest can address a number of dimensions of poverty, the poor have complex livelihood strategies. It is necessary to put the people at the center of our analysis. During research, it was found that the training conducted for the IGA in Padali was rarely following it after training. Training like pickle making, leaf-plate (*duna tapare*) and brikaid were inactive but it was useful for MHCF, where many people were continuing it for survival strategies. It was because of they had no other option for survival. Such training was not actual need for the HHs of PCF where many people were engaged in business and employed. But one thing is true that loan program has made it possible to avoid high- interest loan, from the local money lenders in both PCF and MHCF. The demand of the forest product seems to have declined in PCF where people use kerosene, gas for cooking and heating purposes. On the other hand, in MHCF the demand of forest product has gone up. Where the people use wood for cooking and heating purposes.

6.3 Contribution to Household

An informant reported that users have opportunities to save their expenses by using forest product from community forest at a subsidized rate compared to market rate. Both PCF and MHCF were distributing

forest product in subsidized rate for members. For example the cost of 1 *bhari* firewood (1 *bhari* abt 20 kg) cost Rs 5/- , similarly the cost of per cu fit timber was Rs 20/- in PCF and Rs 50 in MHCF. It was found that forest had provided them skill training for the diversification of income generating strategies, often including, brikaid, pickle, duna tapare, beekeeping, vermin compositing, business, to make livelihood resilient. Sitaram Tamang who was one of my respondent in MHCF earned Rs 600,000/- between *Kartik* to *Baisak* (October-April) from brikaid. After deducting the expenses in labour and transportation he has been saving Rs 300,000/- a year.

6.4 Supports to Natural Capital

During my field work, it was found that CFs had practiced several activities such as planting, protection, harvesting and distribution of forest product.

Most commonly used forest product in study area were timber, fire wood, poles, tree fodder, leaf litter, grass, bamboo, fibers, vegetables (mushroom, fern, bamboo shoots, nettle, etc.) fruits, medicinal herbs, and barks. Since, 2010 users of Padali and Mahila Haryali CF have started medicinal plant and cardamom plantation. Members informed me that rules regarding the distribution of forest product are set with the consensus of household's heads.

6.5 Supports to Physical Capital

Both CF also had contribution to physical infrastructure development as well as improvement of on the house type due to the supplement of timber to users. One of my respondents of Lamatar Raja Ram Poudel informed me that, all the wealth categories of the users were involved in

the construction of motorable road to Lakhuri Bhangyang. The constructions of road and regular motor services had not only facilitated the access of village to market of Kathmandu but they have also expanded the market goods in the different corner of village. The flourishing tourism industry around in Katmandu had produced little benefit to the people of study area. Several restaurants and hotels were opening in Lamatar. But informants from MHCF expressed their, dissatisfaction; they believed that tourism industries had benefited upper-caste only, people who were economically prosperous with them. Rather, they argued that the increasing number of hotels, restaurants every year had heightened the prices of vegetables and other commodities in local area. They had set the wealth categories for the distribution of forest product; first priority was given to poor families.

CASE 2: Distribution of Natural Capital.

Santa Bahadur Tamang, a landless household in Mahila Hariyali Community Forest, said:

“Last year, I was separated from joint family and made plan to build new house. According to the norms set in village, I had chosen trees and gave application to the Committee for timber. In the same time a man economically better gave the application and selects the same tree which was already chosen by me .The committee decided to give the tree for me, by comparing the economic status between us.

The argument preferred in the case of Santa Bahadur Tamang clearly indicates that the community forest also support to the economically poor family to support their livelihood in the case of Mahila Hariyali Community Forest.

6.6 Supports to Financial Capital

It was one to the important aspects that could help to diversify livelihood. There were two ways to support the financial capital. First FUG's own fund and second was the money support from other institution. This type of credit program was implemented in both CF. IGA that HHs were involved in the area of brick production, mushroom farming, small shop keeping etc. Table 10 showed that the Padali CF had good access to local government organization which was not seen in Mahila Hariyali CFs because more people were educated in Padali.

Table 11: Annual Budget of Padali community Forest 2067/068

Table no. 11

| Income | Rupees |
|----------------------|---------------|
| Due in Bank | Rs 3071/- |
| Selling/ Timber | Rs 1258/- |
| Donation (D.D.O) | Rs 68000/- |
| Membership | Rs 4218/- |
| Total | Rs 76,547/- |
| Expenses | Rupees |
| Jaributi, plantation | Rs 65,123/- |
| Miscellaneous | Rs 1568/- |
| Due in Bank | Rs 3205/- |
| Guard | Rs 6650/- |
| Total | Rs 76,547/- |

**Table12: Annual Budget of Mahila Hariyali Community Forest
2067/068**

| Income | Rupees |
|---------------------|---------------|
| Membership | Rs 1680/- |
| Donation/ INGO | Rs 100000/- |
| Selling / Timber | Rs 370/- |
| Total | Rs 102050/- |
| Expenses | Rupees |
| Cardamom plantation | Rs 100000/- |
| Miscellaneous | Rs 500/- |
| Total | Rs 100500/- |

The annual budget of two different CFs clearly indicates that they have well access to the donor's organization to increase their financial capital. However, the access to the government was better to the padali CF.

6.7 Supports to Human Capital

Human capital represents skills, knowledge, ability to labor and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives (Carney, 1998). Data showed that the Padali had higher literacy rate than Hariyali. It was found that FUGs with some NGOs supported project provided income generation and vocational skills to users.

A case related to the human capital in Mahila Hariyali CF supposed to useful to illustrate.

CASE 3: Changing Livelihood

Muna Tamang, a widow living in khani gaun wards no -4, who struggle to feed her family two meals a day. She lives with her two children .She lost her husband few years ago .The sole bread earner Muna worked as domestic helper for various family. Battling rising cost and poverty, she was relieved when she was offered Brikaid training by community forest. Muna joined the training and learned new skills and now makes a living by making Brikaid. She makes almost 100 Brikaid a day and gets Rs 2 a piece. She earns Rs 150-200 a day whereas earlier as domestic helper she made about Rs 2000 to 2700 a month. With the additional income, she has been able to open a saving account in a local bank.

Muna was very happy with such training given by the community forest. Now, she also able to afford sending children to school, celebrating festivals and making household expenses meet.

The case 3 clearly illustrated that the support of CF for member to enhance the human capital of poor family in Mahila Hariyali Community Forest.

CHAPTER 7

SUMMARY AND CONCLUSION

7.1 SUMMARY

The main objective of the research was to examine the impact of community forestry on livelihood of Padali and Mahila Hariyali Community Forestry in Lalitpur district. The first objective of this research was identify the different assets/capitals and second objective was identify the income generating activities.

The ‘asset/process/activities’ framework has been applied to examine the impact of CFs on livelihood. The households interviewed in Padali and Mahila Hariyali employed a mixture of strategies to meet survival needs. Villages have different economic life. For example in Lamatar more people were involved in business and government and non-government job and such trend was not seen in Khaltey village. Data presented in this research clearly state that Khaltey and Lamatar village have occupied different assets like human capital (the education, skills, and health of households members), physical capital (e.g. Farm equipment or sewing machine), social capital (the social network and association to which the people belong); financial capital and its substitutes (saving, credit, cattle etc.); and natural capital (the natural resource base).

However the assets were not same in these two villages. For example human capital, physical capital, social capital of Lamatar was better than Khaltey. But Khaltey village has greater natural capital than Lamatar. Within the same community the assets were varied. Several training related to IGA has carried out by CFs for the capital improvement. Such training was effective for MHCF in human capital improvement. But in

PCF users already had more other option, respondents were mostly educated and work as small businessmen, teacher, on the village committee, or in office job. Brahmin and Chhetri men were less in making basket, mats, brikaid, and pickle. Training related IGA seems less effective.

Literacy was higher in Lamatar through which they could able to access new opportunities. They have established of at least one family member in a secure nonagricultural occupation. Especially non-farm activities were dominated heavily such reliance on non-farm activities as a source of income and parallel declined in incomes from agricultural wage labour, in the past almost all the HHs were engaged in agriculture but in these days, there is subsequent changes in cropping patterns as a result of climatic and non- climatic factor ruin livelihoods in agriculture. At the same time road, power and communication system had entered in the village, thereby enabling large and medium scale farmer to diversify in to non-farm activities.

On the other hand in Mahila Hariyali CF, entire families were from Tamang community. More young people were found to be attracted to CFs, especially training related to IGA. They have established *brikaid* factories to generate income. The economic activities in which Tamang were engaged have diversified. The way they carry out their agricultural work has also changed because in the past earning livelihood from agricultural meant planting cereals crops and keeping livestock, agriculture was done to meet the subsistence needs only. At present, introduction of trainings related to agriculture deals with intensification of the cultivation of crops. One surprising thing in MHCF is that they didn't have any co-operatives in village. They spent total earning to

fulfill their basic needs. Several activities were carried out by FUGs (PCF and MHCF) for livelihood security. The diversity of livelihood is an important feature of rural survival but as an anthropological lens diversity is closely allied to flexibility, resilience, stability. In this sense diverse livelihood system are less vulnerable than undiversified one.

Some positive impact of such diversification can be seen in Padali and Mahila Hariyali CF. Seasonality which causes peak and trough in labor utilization on farm and creates food insecurity. The diversity of livelihood which was seen in both CF contributing to reduce such adverse effect by providing alternative sources of income in off-peak periods.

Due to climatic non climatic factor cropping-pattern was changing in PCF and MHCF. At the same time practices of cardamom and medicinal plant plantation carried out by both CF has some positive result. This was catalyst for better livelihood of FUGs. Establishment of brikaid factory, animal husbandry by CFUGs and involvement in business, government and non-government offices were helping to generate substantial amount of earnings. PCFUGs were putting assets in productive use; it was seen in educating their children. This was rarely seen in MHCF. They spent total earning in daily expenses.

7.2 Conclusion

Livelihood is the process of adapting with environment in particular Space and time. There is change in any space and society and we have to accommodate with societal demands and environmental directions. The result of this study indicates that people's livelihood and community forest influenced by following factors:

The nature of livelihood systems within a region; more specifically the extent to which individuals and households are able to diversify income strategies and incorporate non-farm components which tend to be less vulnerable.

The ability of people to migrate or commute in order to obtain access to non-farm or agricultural sources of income outside of village. Social relation genders, class, age, institution, organizations, modified livelihood strategies and resulting in NR-based activities and Non-NR based activities. The data present in thesis indicates that if human capital is better than people give less priority to natural capital especially forest and livestock for their livelihood. On the contrary, if there is less human capital than people exploit more natural capital. For example in Lamatar people are more educated than Khaltey. They were not depend up on forest resources for livelihood but in Khaltey more people were depend upon forest resources for livelihood it was because of there were no more option.

Assets are interrelated, we can't understand them separately. In many studies it was found that at small landholding size generally people depend upon the forest. But in this study data shows that they are not totally depend up on forest if they have other option. It may be suggestions that IGA carried out by the CF has played vital role for livelihood of villagers. Road construction, changes on economy are most responsible for livelihood. IGA has changed the social and economic status of MHCF and PCF Users Group. All capitals in community are interrelated with each other. We can't understand them separately.

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Annex-I: Household Survey

1. Respondent's Name:

Male... Female... Caste/Ethnic.....

Village/Town..... Ward No... District.....

Tole..... Religion.....

2. Details of the household members:

| S.No. | Name | Age | Sex | Relation with Hh head | Marital Status | Education | Occupation |
|-------|------|-----|-----|-----------------------------|-------------------|-----------|------------|
| | | | | | | | |

Relation: Hh= Household Head, Hu= Husband, Wi= Wife, Br= Brother, Si= Sister, Fa= Father, Mo= Mother, So= Son, Da= Daughter (Use Combinations of these for other relations).

Marital Status: NM= Never Married, CM= Currently Married, Wid= Widowed, Sep= Separated, Div= Divorced / **Education:** Specify as Illiterate Literate (for those who can read write only) and Class /Level/Degree (if applicable).

3. Which of the following are the sources of Livelihood for this household? (

Tick the applicable categories and circle the primary source)

- a) Agriculture b) Horticulture c) Livestock Raising
- d) Craft Services e)Wage Labour (agri) f)Wage Labour (other)
- g) Business(Buy and Sale) h) Business (Shop)
- i) Job/Service-in Nepal (Underline: Govt. or Pvt. j) Job/Services-Elsewhere
- k) Other (Specify)

4. Do you have cattle?

| | | | |
|---------|--|--|--------|
| Yes.... | | | No.... |
|---------|--|--|--------|

If yes, Please provide information

| Livestock | Number | Stall-feeding | Grazing |
|-----------|--------|---------------|---------|
| | | | |

5. Is your farming production sufficient for the year?

Yes No.....

If not sufficient how many month?

| Month | Tick |
|-------------|------|
| 1-3 month | |
| 4-6 month | |
| 7-9 month | |
| 10-12 month | |
| Above month | |

6. If you have to take loan, who do you normally get it from?

Local Money Lenders... Relatives..... Bank.... Others....

7. What are the major areas of expenditure?

| Items | Amount (Rs.) |
|----------------|--------------|
| Fire wood | |
| Kerosene | |
| Treatment | |
| Clothes | |
| Electricity | |
| Transportation | |
| Others | |

8. Do you have facilities of electricity?

Yes... No...

9. Major Crop growth in your land?

Paddy... Wheat... Maize... Millet... Potato...

10. Major fruits grown in your land

| Fruits | Quantity | Price |
|--------|----------|-------|
| | | |
| | | |

11. Do you have facilities of electricity?

Yes.... No....

12. What are the sources of drinking water?

Well... Tap... Spring...

Annex-II: Checklist for Key Informant Interview

1. What kind of forest products is available in your forest?
2. Why do you use these products?
3. Do you involve in IGA?
4. What type of IGA in your village?
5. How many months can family 'eat' from your own production?
6. If there has been a positive change after your participation in the IGA?
7. How do you meet the food requirements for the remaining months?
8. Livestock owned by HHs before joining IGA and Today.
9. How do you manage your Livestock?
10. If you were mostly grazing your livestock in the forest before? When did it change why?
11. What fuel do you use at home for cooking?
12. Rank the work/activity that has been the main sources of earning livelihood?
13. What kind of plants do you use for rituals and religious performances?
14. How do you use?
15. What is their present condition?
16. If not available, how do you conduct these rituals?