

CHAPTER I

INTRODUCTION

1.1 Background

Nepal is predominately an agricultural country where more than 78 percent of its population rely on farming for their subsistence. The majority of farmers occupy less than 0.5 ha of farmland. The small patch of land is not fertile enough. Therefore, they depend on forest products. People seek to use forest either as agriculture land or as source of earning. Such people depend on forests for fuel-wood, fodder, timber, herbal plants and other forest resources.

Most of the rural people in Nepal traditionally depend on farming and livestock rearing for their livelihood. Forest is the major component of farming system and plays a vital role in the rural economy by providing fuel, construction materials, and animal feed. In Nepal, this traditional practice has been legitimized through the implementation of community forest program. Since the last twenty-five years, this program has been implemented with the objective of forest restoration and the participation of locals in the management of forest and allows them to derive forest resources for their benefits with equal focus on optimum conservation of vegetation.

Community forest can provide multiple goods and service comprising physical forest products and environmental services. Timber, fuel-wood, fodder, grass, leaf litter are collected by local people to satisfy their daily needs. Besides, forest also provides many other non-timber forest product of high economic value including medicinal and aromatic products. They also contribute to conserving soil and water resources and sequestering carbon. Thus, timber and non-timber products, recreation, climate regulation, carbon sequestration, option and existence values are the major benefits of forests. The forest services are of locally, nationally or even globally important (CFDP 1995).

Women's lives are the most seriously affected by environmental damage and the shortage of forest products. Women, together with their children, are the main collectors of fuel and

other forest products such as animal fodder and leaf-litter for compost. They also take primary responsibility for herding family livestock, including cattle, sheep and goats. Women's roles in the collection of forest products are associated by the context of their other household responsibilities.

Several factors explain the differentials between male and female workloads. In addition to agricultural and animal husbandry responsibilities, women have primary responsibility for food processing, fuel and fodder collection, and domestic chores, including cooking and child care. In many households men have migrated to other parts of Nepal or to India or even abroad in search of wage labour and temporary employment to supplement household income. The women then must assume a great proportion of the agricultural tasks as well.

After participation of women in Community Forest (CF) management there have been many changes because women always been sincere for their work. After their participation, protection of forest was found good. So women play a vital role for the management of forest resources in Nepal.

In these circumstances, the purposed study tries to look at the situation of women participation in community forest management and perception of women regarding the motivating factors and hindering factors that influences their role to involve in CF management. The study users are of Patlemuldol community forest of Bisankhunaryan VDC in Lalitpur district of Nepal.

1.2 Statement of the Problem

Forest is a crucial component of the rural people for their livelihoods. It provides basic needs of fuel-wood, fodder, timber and green manure to the farmer and equally important in providing minor forest products which help to generate income to the local people. Forest is the integral part of farming system in the hills of Nepal. Forest resources are essential to the survival of farming people such as water for drinking and irrigation, fuel-wood for cooking and heating, fodder for livestock feeding, wood for shelter and enriching soils for growing crops. Since a long time back, hill farmers have been involved in forest management to sustain farming system.

In the context of forest management, women have been contributing for protection and management of the forest resources from time immemorial. However, their involvement in different aspects of natural resource management has been mostly in the form of nominal participation (Ostrum 1992). Their role is subsided by the existing patriarchal cultural practices, religious beliefs and value system, even though they are the prime managers of the natural resources (Njoroge 1999).

Women have been the prime managers of the natural resources from time immemorial (Njoroge, 1999). They have made great contribution in plantation, weeding, pruning and thinning activities of forest resource management. They are the responsible person for the collection of firewood, fodder, leaf-litter and so on for their livelihood. In addition, especially, in the rural areas, commercially valuable products such as medicinal plants, fruits, nuts, mushroom etc. are mainly collected by women (Banjade 2003).

Women are the real users and responsible for protection, management and utilization of forest products. Fundamentally, this research tried to assesses women's participation in community forestry management from various dimensions based on their existing socio-economic and cultural background. More specifically, this study had focused to seek answers of the following questions:

- J What are the socio-cultural and economic features of the women users of Patlemuldol community forest of Bisankhunaryan VDC in Lalitpur district?
- J What are the rules and regulations the user have made for the management activities to their forest?
- J Are women users involving equally in decision making, monitoring and evaluation and benefit sharing activities of the community forest?
- J What are the motivating factors of women's involvement in community forest management?

1.3 Objectives of the Study

The general objective of this study was to examine women's involvement in community forestry management especially in implementing new programs, decision making and management of local forest resources. It also tried to determine the socio-economic and cultural condition of respondents at the study area. The specific objectives were:

- J To find out socio-cultural and economic characteristics of the women users of Patlemuldol community forest of Bishankhunaryan VDC in Lalitpur;
- J To examine women's involvement in different aspects of community forest management especially on decision making process; and
- J To assess motivating and hindering factors of women's involvement in community forest management.

1.4 Significance of the Study

Nepalese women can play the vital role and contribute to manage natural resources, its development, and conservation, which ultimately leads to the building the nation. In the Nepalese context, rural women are the real users of the forest resources. Therefore, their involvement and contribution in the CF management process needs to be recognized and properly incorporated in to the community forestry policies and strategies. Different development initiatives are focusing on women's participation in natural resources management. It is therefore, this study was concerned whether there is an actual involvement of women or not in community forest management.

This study basically explains the different dimensions of women's participation in CF management. Moreover, it considers the socio-economic status of the study area i.e. the socio-economic situation, caste, religion, demography, literacy, land holding size, food sufficiency, occupation, livestock raising, housing pattern and physical facility available at the household level. Similarly, decision making process in forest management, implementation, monitoring, evaluation and benefit sharing process were also analyzed.

This study explains the problems associated with women's involvement in CF management activities and accessibility of forest products in relation to their economic condition in the society. Besides this, the study also suggests some of the areas to be analyzed within the existing frame. This study is also expected to help the planners and decision makers to review and re-think on the status of community forestry management from gender prospective.

1.5 Limitation of the Study

This was a research work mainly conducted for an academic purpose based on the information from primary sources and suffered from certain limitations that covers:

-) This is only a micro level study on community forestry focusing on involvement of women in its management in Nepal.
-) Due to the time and resource limitation, the field survey was conducted only at a community forestry user group. Thus, the generalization made in this study may or may not represent the country as a whole.
-) The data collected on different characteristics of ideas, thoughts and voices of people was mainly be based on the memory of the respondents, thus some errors may be expected due to memory lapses.
-) The success stories that has cited in this study may or may not represent the total scenario of the extent of management of community forestry in the country.
-) The calculation and analysis made in this study was based on the simple statistical tool used i.e. percentage, average, range, mean and simple bar and pie chart.

CHAPTER II

REVIEW OF LITERATURES

The relevant literatures on community forestry were reviewed so as to specify and better understand the study problems. Literature review has helped the researcher to clarify the concepts and formulates new ideas and better ways of looking at the study topic. Published literatures were reviewed to know what has already been done. There are significant numbers of studies related to the role of women in community forestry of which only a few are outlined here.

2.1 Natural Resources and Forestry in General

Forestry is the science, art, and business of sustainable managing our forests for all of the multiple uses and values required by society for its social, biophysical, and economic well-being (Lakehead 2008). Moreover, it is the science, art and practice of understanding, managing and using wisely the natural resources associated with, and derived from forest lands. These resources include timber, water, fish, wildlife, soil, plants, and recreation. The utilization of all of these resources is part of the cultural heritage and modern resources management embraces these values. Forestry starts with trees—knowing how they grow and what part they play in the world as a whole. Forests affect how we live and provide many things we use, so it is important to take care of them, understand what they give us, and use them wisely.

Forestry is the science, art, and practice of creating, managing, using, and conserving forests in a sustainable manner to meet desired goals, needs, and values (SAF 2008). In simpler terms, the forestry profession focuses on caring for trees, soils, water, wildlife, and other forest benefits, both for now and for future generations. Forestry includes such diverse specialties as forest, wildlife and fisheries, pest, disease, and fire management; research and teaching; forest recreation, wilderness, and watershed management; agro- and urban forestry; policy and economics; communications; technology applications; genetics; and environmental degradation.

2.2 Social and Community Forestry

The term “social forestry” was first used by the Indian government in 1976 to describe forestry on village not forest reserve land. This reflects the widespread debate at the time over issues such as what the real objectives of social forestry activities were (or should have been) and what the outcomes were both in terms of stated objectives and unexpected results (ODI 2008).

Social forestry scheme can be categorized into groups: farm forestry, community forestry, extension forestry and agro-forestry (Edugreen, 2008).

Social forestry also aims at raising plantations by the common man so as to meet the growing demand for timber, fuel wood, fodder, etc, thereby reducing the pressure on the traditional forest area. This concept of village forests to meet the needs of the rural people is not new. It has existed through the centuries all over the country but it was now given a new character.

With the introduction of this scheme the government formally recognized the local communities’ rights to forest resources, and is now encouraging rural participation in the management of natural resources. Through the social forestry scheme, the government has involved community participation, as part of a drive towards afforestation, and rehabilitating the degraded forest and common lands.

The "Community forestry" is a village-level forestry activity, decided on collectively and implemented on communal land, where local populations participate in the planning, establishing, managing and harvesting of forest crops, and so receive a major proportion of the socio-economic and ecological benefits from the forest" (Martel & Whyte 1992).

"Successful community forestry requires... genuine popular participation in decision-making... Experience has proven time and again that participation is more than a development cliché; it is an absolute necessity if goals are to be met. But, working with people rather than policing them is a new role for many foresters" (Eckholm et al 1984).

Community forestry has the following characteristics: the local community controls a clearly and legally defined area of forest; the local community is free from governmental and other outside pressure concerning the utilization of that forest; if the forestry involves commercial sale of timber or other products, then the community is free from economic exploitation of markets or other pressure from outside forces; the community has long-term security of tenure over the forest and sees its future as being tied to the forest" (J. Evington 1992).

Community forestry, social forestry and rural development forestry are more or less equivalent and reflect Abraham Lincoln's view of democracy - government of the people, by the people, for the people"(J. Burley 2008).

The terms "social forestry", "community forestry" and "farm forestry" are frequently encountered and used interchangeably. Kirchhofer and mercer (1984), for example, define community forestry (social forestry at village level) and farm forestry (social forestry at household level) as subsystems of forestry at the regional and national levels.

Similarly, both "social forestry" and "community forestry" can be used interchangeably if it refers to a social oriented forestry practice or project at the village level. In this regard, Palit (1996: 12) defined social forestry as:

'Any activity (such as the purposive growing of trees, certain techniques in crop production soil conservation, improved use of wild forest products) of a social group which has as its ultimate effect a movement of that group while at the same time lessening the pressure which that population is applying to the resources of the natural forest through a more efficient and more intensive use of land'.

2.3 Forestry in Nepal: Policy history and Strategies

The Forests Division was established in 1942 for the scientific management of forests under state ownership (HMG/N 1976). During the period from 1942 to the mid 1970s forest management was exclusively protection oriented. Because people live near and are dependent on forests, management must include local people as they fulfill their needs for

firewood, fodder and timber. Although the forests have been nationalized and forest officials made very powerful, as a result, deforestation continued and forest management was practiced in vain. Forest management as practiced exclusively by the department was not successful. Including local people in forest management and providing an incentive for local management became a crucial issue. The National Forest Plan of 1976 was highly committed to initiate people's participation in forest management and made provisions to hand over a part of government forests to local political units or village councils called "Panchayats."

'The Panchayat Forest and Panchayat Protected Forest Rules 1978' officially initiated the implementation of a community forestry program in Nepal. Forest lands without trees were handed over to local panchayats as "Panchayat forest" and with trees as "Panchayat protected forests." Once the forests were handed over as Panchayat Forest (PF) and Panchayat Protected Forests (PPF), political bodies were required to conduct the protection and maintenance of forests and implementation of a scientific forestry management plan prepared by the Forest Division in consultation with the Panchayat. The Panchayat and Panchayat Protected Forest Rules of 1978 also had some inherent problems such as forests were not handed over to actual users who were protecting the forests or who could protect the forests. Because the forests were highly degraded, there were no initial benefits and incentives for long-term management. Similarly, since the Panchayats used to get a portion of the income from the PPF, the villagers lacked incentive for managing the PPF (Panchayat Forest and Panchayat Protected Forest Rules 1978)'.

'The Master Plan for the Forestry Sector' (MPFS 1989) was approved in 1989 providing a 25-year policy and planning framework and remains the main policy and planning document for the continuing development of the forestry sector. The long term objectives of the Master Plan was to meet the people's basic needs for forest products on a sustained basis, conserving ecosystems and genetic resources, protecting land against degradation and other effects of ecological imbalance, and contributing to local and national economic growth.

The Master Plan, regarding community forestry programs, highlighted of handed over all the accessible hill forests of Nepal to user groups (not to the Panchayats) to the extent that they are willing and capable of managing them and the priority of community forests is to supply forest products to those who depend on them with the adequate involvement of women and the poor in the management of community forests.

The major recommendations of the Master Plan have been incorporated in the Forest Act (1993) and Forest Rules (1995). The act and the rules have given substantial rights to local people in managing their community forests². The codification of these rights in the national legislation is one of the unique features of community forestry in Nepal. Further elaboration of these rules is made in the community forestry directives and guidelines. The focus of this legislation is on institutionalizing CFUG as an independent and self-governing entity, nationwide expansion of community forestry, providing utilization and management rights to the local community, and creating an accountability forum for community development. It has also limited the role of the district forest office to that of supporter, facilitator, monitor and regulator of community forestry.

'Forest sector Policy 2000' withdraws some of the rights of local forest users in the plains area of Terai, with the intention that the forests would be better managed by the active involvement of the government. The new policy has created antagonism between the Terai users and the government, and the government has not been able to manage the forests better. Presently, the government is trying to pilot an approach called "collaborative forest management" in the three Terai districts with the financial support of the Dutch government. The outcome of this pilot program has yet to be seen in the field. As per this cabinet decision, the government imposed 40% revenue sharing on the sale of Timber from the CF of the Terai and Inner Terai. However, the Supreme Court annulled this decision. The government, then, started to collect this revenue through the promulgation of finance act. The finance act was later revised in the last and this fiscal year. As per the revised finance act, the government collects only 15% of the sales proceeds from the sale of surplus timber of only two commercial species of the Terai.

The 'Tenth Plan' was prepared in the context of Millennium Development Goals, and is also considered as the Poverty Reduction Strategy Paper (PRSP). The plan has as its target the reduction of poverty in Nepal from 38% to 30% by the year 2007. It has four pillars for intervention - broad based high economic growth, social sector development, social inclusion/targeted programs, and good governance. In line with the overall objectives of the PRSP, the Forestry Sector under the Tenth Plan also has goals of reducing deforestation, soil erosion and the degradation of biodiversity as well as solving the problems of poverty and unemployment. Sustainable management and conservation in this case includes managing a supply of forest products while conserving the environment through management and enterprise development of forests, watersheds, plant resources and biodiversity. Poverty alleviation includes providing employment and income opportunities for the poor, women and disadvantaged groups using participatory approaches and expanding forest development activities, as well as providing greater access to decision making in CFUGs. The plan also allows farming of NTFP and medicinal plants within community forest areas. Finally, the user group formation process will be monitored and improved to address the challenge of achieving equitable forest product distribution among community forest users.

2.4 Community Forestry in Nepal

In 1978, the government, recognizing the rapid depletion and deterioration of the country's forest resources and the Forest Department's limited capacity to handle the problem alone, introduced community forestry policy to seek local communities' cooperation in the sustainable management and use of the country's forest resources. The policy puts control of forests in the hands of the users of the resource, with the role of the Forest Department staff shifting from that of manager and controller of forests (policing) to that of adviser for forest users (HMGN 1989).

Community forestry is most accurately and usefully understood as an umbrella term denoting a wide range of activities which link rural people with forests, trees, and the products and benefits to be derived from them. Gilmour and Fisher (1991) define community forestry in terms of control and management of forest resources by the rural

people who use them especially for domestic purposes and as an integral part of their farming systems. Since community forestry constitutes both social and biophysical elements, they both are equally important. The "resource" can be managed effectively with a clear understanding of forest management principles and knowledge of natural system and "social" part can be dealt with a clear understanding of a society and their relationships with the resource and institutions related to it.

The way community forestry approach used to be defined and interpreted in Nepal up until late 70s, suggests that community forestry implies 'community-resource' relations, commonly known as 'indigenous system of forest management' (Fisher 1989), which was widespread in Nepal's hills. During 80s and beginning of 90s, nevertheless community forestry was further conceptualized and internalized, new policy framework was crafted (HMGN, 1988), legal instruments have been in place (HMGN 1995), various processes, methods and tools have been developed, modified, re-modified and experience gained. During this period, community forestry was understood and recognized as government's priority programme, for which the role of forest bureaucracy in the hills changed from policing to facilitating leading to the evolution of community-resource relations towards a triangular interface among community, resource and government bureaucracy.

In the late 90s, with the changing political and policy context, community forestry is being understood and conceptualized in terms of stakeholders relationship because there has not only been increasing trend of FUGs, tremendous number and types of stakeholders and service providing agencies and organizations, with diverse interests and influence have emerged and grown. The pattern of interactions among these agencies with FUGs and government organizations in fact influence each other's action, their own governance system, gender equity issues, and ultimately to the way how resource is managed and utilized, how the management plans, strategies and programmes are designed and implemented, how negotiation takes place and conflicts are resolved for effective forest management in order to achieve the desired outcomes at people's livelihoods and resource condition level. This is the context within which community forestry in Nepal is growing and always progressing. It is not like as it was in the past and it will not be in the future as it

is now, therefore community forestry should be defined, redefined and understood in a dynamic way.

The present form of Nepal's community forestry is guided by the Forest Act of 1993, Forest Regulations of 1995, and the Operational Guidelines of 1995. These legal instruments have legitimized the concept of Community Forest User Group (CFUG) as an independent, autonomous and self-governing institution responsible to protect, manage and use any patch of national forest with a defined forest boundary and user group members. CFUGs are to be formed democratically and registered at the District Forest Office (DFO), with CFUG Constitution, which defines the rights of the users to a particular forest.

In 1978 the Community Forestry Development Program (CFDP) introduced the concepts of Panchayat Forestry (PF) and Panchayat Protected Forestry (PPF) with the purpose of handing back for protection and management of the forest to the people. In the 1980s, decentralization regulations were introduced in the forestry sector to establish and foster local people and local organizations, participation in the management and development of PF and PPF. In 1990 at the end of Nepal's Panchayat System of government brought a change in the status of PF and PPF. Today, the term community forestry is used to refer to any forest under user group protection and management (Chhetri and Pandey 1992).

Community forestry has received high priority in the forestry sector program to the government as reflected in both the master plan for the forestry sector HMG, 1988 and the eight five year plan (NPC, 1992). The main thrust of the community forestry policy of the government is the phased transfer of management and utilizations of community forest to the actual users based on simple operational plans which are prepared and endorsed jointly by the forest user and the assistant ranger from the district forest office. Assistant rangers are supposed to apply the rules, schedule and other institutional arrangements made for forest production management and utilization (Adhikari 2001).

Before 1957 there were no strict rules and regulation for the protection and use of the forest. The government paid no attention to develop the forest and allowed forest use to continue at higher rate, forest rehabilitation was simply ignored, so rapid deforestation has been seated

serious problem e.g. floods, landslides, water security, decreased agriculture and livestock productivity etc. Generally the factors responsible for deforestations increased demand of forest and forest products due to population growth, clearance of the forest to increase the agricultural land and grazing livestock in the forest.

To solve the increasing problem of deforestation, in 1957 the government nationalized all forest to prevent the destruction of national wealth to nationalize private forests for their adequate protection (Regmi 1978). Unfortunately, the government was not prepared to assume the technical and administrative responsibilities of forest ownership. Villagers reacted negatively to nationalization, believing that their traditional rights of access and use had been curtailed. As a result, local responsibility for forest protection disappeared whereas previously these had been communal responsibility for managing the forest, but after nationalization, no one took responsibility of managing the forest. Moreover, because there were no land records, villagers had a strong incentive to destroy the forest, so that the land could be claimed as private property after it was cleared and cultivated, as a result of inadequate government control and adverse local reaction to nationalization, Nepal's forests effectively became common property (Dankelman 1989).

The forestry Act of 1961 and its subsequent amendment and rules became the basic law governing forest administration in Nepal. Likewise the forestry act and the forestry protection Act 1967 attempted to establish empowering community to protect and manage the forest. Community and till leasehold forestry are at present the most important aspect of forestry development in Nepal.

2.5 Women's Participation in Community Forestry Management

In the Asian countries women (more than men) spend a significant portion of their time in forest related activities such as farming, collection of fuel wood and fodder, grazing animals, fetching water and cooking. Several studies conducted in different parts of country so that this is also case of Nepal and such studies stress the need to involve women in forest management so that the community itself can protect and develop local forest resources successfully (New ERA 1983).

Siddiqi (1989) argues that Women's participation will help the forest first & the women second. Women will have to give forestry before forestry gives to them. He writes that it is essential to involve women in developing and implementing workable management plans, there has to be a targeted effort to draw them in. Because of the nature of Nepalese society and positions of men women in it, other strategies may be unworkable, e.g.; the attempt by the Nepal Australia Forestry Project to integrate women into existing organisations rather than organise a separate structure for them, which proved to be unworkable.

Women have worked successfully in both mixed and all female forestry committees in rural Nepal. Men and women and professional foresters now generally agree that women are capable of committee management. She argues that women's membership of forestry committees be promoted, primarily through extension activities (Inserra 1988).

Box 1 The Chipko Movement for Forest Protection

The Chipko movement was against add official forestry policies of government and mainly concerned with local employment. Initially, Chipko workers were both men and women. Later, more women joined the movement when they realized that the recurring floods and landslides from which they were suffering by deforestation. When the forest department announced auction of 2500 trees in the Reni forests was overlooking the Alak Nanda Rivers, which has already flooded disastrously then women started to embrace trees to prevent them being felled from the company that won the auction. They physically prevented the tree, felling and thus forced the Uttar Pradesh Government to investigate. Two years later, the government placed a 10 years ban an all tree felling in the area. After that women prevented felling in many other forests all along the Himalayas. They have also set up cooperatives to guard local forests, and to organized fodder production at rates that will no harm the trees. Within the Chipko movement, women have joined in land rotation schemes for fodder collection, helped replant degraded land and established and run nurseries stocked with species the select (Borg, BVD 1989).

Women's participation in a programme also depends on how they perceive the benefits accruing from it. Castillo puts people's participation depends on how effective a programme is in fulfilling the interest of the people. Generally, speaking the higher the prospect of benefits from a development programme, the greater will be participation in its activities (Cohen and Up Hoff 1977).

Hoskins (1981), argues that the in which programme's benefits are shared out is also a major factor affecting in participation. It proved that, the higher prospect of equitable benefit sharing, the greater the chances of women's participation. Further, he argues that women's expertise in forest related activities in generally unnoticed by the concerned agencies and as a result, programme cannot achieve their commitments.

A study conducted in the mid-western development region of Nepal by Panday (1997) shows that representation of women in the EC was nil in seven FUGs and found to be only marginal in others except all-women group. Similarly Adhikari (2001) concludes in his study that CF is as a successful NRM initiative with the management of CFUGs. Management of forest resources through the involvement of resource users has been realized increasingly as a better strategy for protection, conservation and sustainable use of forest resources in the hills. It is clearly demonstrated that women due to their interaction with the natural resources have developed vast indigenous knowledge, skill and technology regarding the conservation, protection, use and management of those resources. From gender prospective, involvement and participation of women in the planning and decision making forum of CF programme were found to be minimal. CF programme can not be as expected if a present trend of women's low participation continues.

Regarding women's participation, data (HMG/DoF 2003) shows that currently 613(4.85%) FUGs are handling by all women group. Similarly, 33567(21.5%) women are working as EC member in different FUGs. The number of formation of all women CFUGs is higher (97 CFUGs) in FY 053/54 and higher in percentage (9.0%) in FY 058/59. Despite the gradual decreasing in number the percentage of formation of all women FUG is optimistically increasing in recent years. As women's strenuous work carried out in other countries, Nepalese women have shown equal concern on forest resource and environmental

management. For example, Women handled CFUGs named Malati of Saptari district showed capability and the won award Ganesh Man Singh Van Samrakchan Puraskar, by conserving the CF efficiently(Gautum,2059).Increasing trend of women member in EC and winning reputed award by all women group indicates women's capability that they can manage any forestry programme they offered.

In rural areas, Indigenous women have much knowledge about forest resources such as fuel wood, fodder and medicinal herbs because women are the main collectors of these products. They have an indigenous knowledge about forest resources and its efficient use. Indigenous Women exploit several different forests and numerous areas within the forests. They travel from low hills to high forests as far as six hours walk above their village. During spring and autumn Indigenous women go to the lower forests, visiting higher forests in the winter, not only to collect firewood, fodder, food and herbs- which are almost solely a women's responsibility, but also to cut nigalo, the bamboo group, for men in the village to work with. Thus, rural indigenous women have the knowledge of identification of species, knew species name, its uses, geographic location, reasonability and availability and conservation of the natural resources (Shrepa 2004).

The importance of women in the collection of forest produce is borne by data from almost every country in Asia, Africa, and Latin America. For instance, in the North-West Frontier Province of Pakistan, women and children collect 78 percent of morels (Iqbal 1991). While women and children are the dominant players in collection and drying, men (53 percent) play a much more active role in the sale of morels. Similarly, women and children collect 90 percent of medicinal herbs and do 100 percent of the drying. Sale of medicinal herbs, disaggregated by gender, shows that 71 percent of the selling is done by women and children, and 29 percent by men (Iqbal 1991).

Similarly, in West Bengal, India, tribal women gather *Sal* leaves for six months of the year to supplement household income (Poffenberger 1990, Rajan 1995). In India, collection of *tendu* leaf (used for manufacturing *bidi*) generates part time employment for 7.5 million

people and they are predominantly tribal women (Arnold 1995). Women in Uttar Pradesh, India derive a substantial proportion of their income from forests and common lands; poor women derive 45 percent of their income from forest and common land compared to 13 percent for men (FAO 1991).

CHAPTER III

RESEARCH METHODOLOGY

This research is a descriptive and an exploratory type which employs both qualitative and quantitative data from primary and secondary sources. The research design entails the different type of data and involves assorted method and techniques to collect the required information. It was ensured that findings and analyzed explanations can be subjected to empirical scrutiny and used for comparison.

3.1 Study Area and its Selection

Patlemuldol community forest was purposively selected as a sample case study area. It is located at the Bisankhunaryan VDC in the Eastern part of Lalitpur district which represents the mid-hill forests of Nepal. About 64 households of ward no 9 of the VDC are primary users of this forest.

The main reasons behind selecting the Pathemuldol community forest for the study were:

1. Among 16 community forests at the VDC, the Patlemuldol community forest, which was handed over to 64 local households in 2052 B S, is one of the well managed mixed CF with higher participation of women and disadvantaged section of the society in its management.
2. The study area consists of various caste/ethnic groups who are divided in to different socio-economic strata. So this research attempts to find out which caste and ethnic women are contributing much for the management of this forest.

3.2 Adapted Approach to the Study

Multiple approaches were adopted to accomplish the study. This study was primarily based on the primary data; however, the secondary information was also gathered through published and unpublished reports, journals and literature review. The major approach applied to achieve the set objectives include:

- J Conducting field survey;
- J Gathering and analyzing primary and secondary information;
- J Reviewing existing literatures and
- J Verifying collected information through informal discussions with key informants and focused group discussions.

3.3 Research Design

In this study, the researcher applied both exploratory and descriptive research design. The exploratory research design was applied to explore the issues concerned with the participation of women in community forestry management activities. Descriptive research design was used to describe the socio-cultural and economic characteristics of the studied population.

3.4 Nature and Sources of Data

In this study, both the primary and secondary sources of information were used. The primary information was collected from the field survey. The survey was designed in such a way that the structured questionnaire and checklists were the basis for formal method used in data generation. Informal talks and participatory assessment was also carried out to enrich and check the efficiency of the formal method being employed. The data from the secondary sources were also gathered and analyzed. Some of the secondary information was collected from VDC office and the Patlemuldol Community Forest User Committee.

Qualitative data was gathered from field survey and informal interviews (participatory assessment) as it is felt that freedom of respondents to discuss their beliefs would lead to greater understanding by the subject to be studied; Quantitative data was gathered mainly from secondary sources and intermittently crosschecked through field survey.

3.5 Universe and Sampling

The Patlemuldol community of Bisankhunaryan VDC of Lalitpur district was selected as universe purposively for the detail study. This community located in Ward No. 9. The total

population of the universe was 405, of which 195 were male and 210 were female with 64 households. All the households were the users of Patlemuldol community forest. Out of total households, 40 user households were chosen for the sample by applying simple random sampling method. Before selection of the sample households, the researcher, firstly, had listed the name of user's household head in the slip of papers and draw the slip of paper by using lottery method. After chosen the sample units from the universe, 40 women were selected as a respondent from the selected sample units.

In addition to this pre-defined criteria, sample for interview with officials from government and development partners and for the focus group discussion, was selected through the purposive sampling approach. Hence, both probability and non-probability sampling designs were adopted in this study.

3.6 Techniques and Tools for Primary Data Collection

3.6.1 Field Survey

Primary data was collected through structured questionnaire (Annex I) which was used to interview respondents. On the spot checking of the entire completed questionnaire will be done so that any ambiguous information can be immediately asked to the respondents. Errors and ambiguities will be detected during this stage by the re-interview if required.

Household survey was conducted to acquire detail information about population characteristics like caste and ethnicities, age and sex composition, marital status, religious, occupation education, etc. Moreover, landholding size, livestock number and their types, housing patterns, source of firewood, fodder and timber of forest products collection and involvement of collection were also collected through household survey. Besides these it also helped selecting the key information who was actively involved in the forest management activities since the beginning.

3.6.2 Observation

Observation was used to collect qualitative information like women's participation in community forest management activities including decision making, monitoring and

evaluating activities, program implementation and benefit sharing. Observation also helped the researcher to recheck the information which is collected through the other tools. In my observation, I observed the participation of women's in different activities such as general assembly, executive committee and operational plan. But I found that women participation is lower than the male due to their household chores.

3.6.3 Focused Group Discussion

Focus group discussion proved helpful to find out relevant information like decision making, evaluation process of CF management activities. Two group discussions were held during the field work. One group discussion was held in respondent house. Through this discussion information about motivating and hindering factors of women's participation were collected. Another group discussion held in tea shop which helped to collect information about socio-cultural practices in the study area.

3.6.4 Key Informants Interviews

Through the key informant's interview, information regarding the women participation in community forest, the history of forest, women's involvement in forest and hindering and motivating factors of women's participation in CF management were collected. Key informants were the knowledgeable persons of the community. Among them 3 were elder people of CF and 2 executive committee members. But the checklist did not limit the discussion to issues raised by the informants. Several probing questions were asked depending upon the level and the capacity of the informants.

3.6.5 Case Studies

A case study views a social unit as a whole (Sharma 2003). The case studies are expected to furnish the research exploring the reality and the realization of community forestry at the local level. In this study, case study has also done. In a case study the investigator makes an in-depth study of a person a social group, and episode, a process, a situation, a community, an institution or any other social units (Kothari 1999).

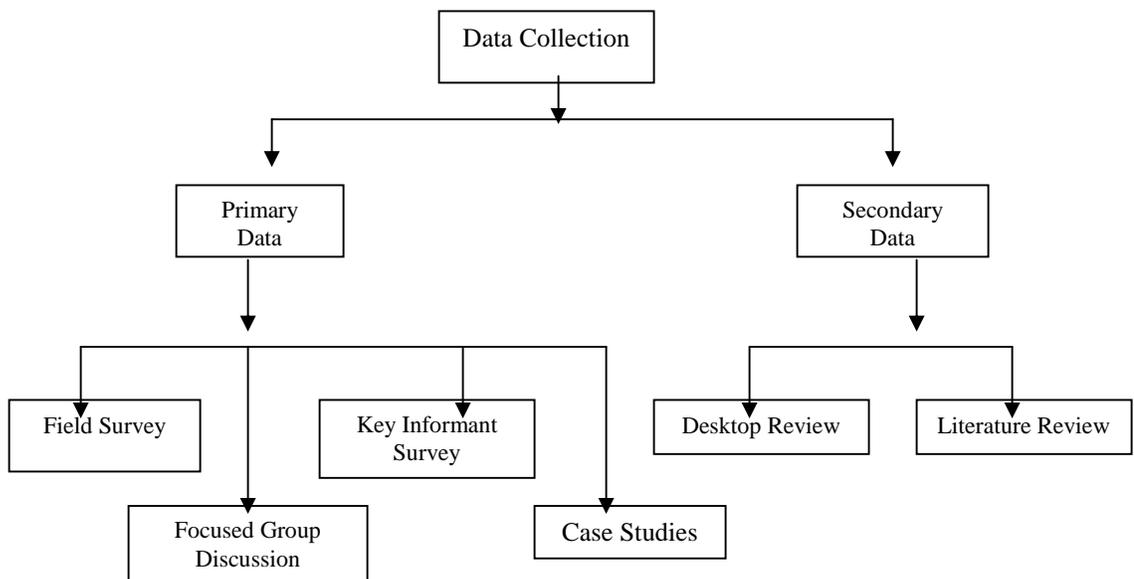
3.7 Data Base Management

The main task of data analysis is to bring the data in to a systematic order out of the mess of the notes, to pick out the central themes of the study and to carry them across to written work (Baker 1999). The qualitative data were analyzed and interpreted descriptively making the argument in logical way. The quantitative data were coded classified on the basis of nature of data and then presented in various tables by using simple statistical tools.

3.7.1 Desktop Review

The desktop review consists of information collection from scattered sources i.e. Department of Forest, District forest Office (DFO) Lalitpur, Village Development Committee (VDC), Federation of Community Forest Groups of Nepal (FECOFUN) and the consultations held with a range of individual from related stakeholders in order to widen the knowledge and share the experiences on community forestry management and involvement of women. This type of desktop review was found helpful in refining the research questions and to direct the study focus.

Figure 1: Data Collection Procedure



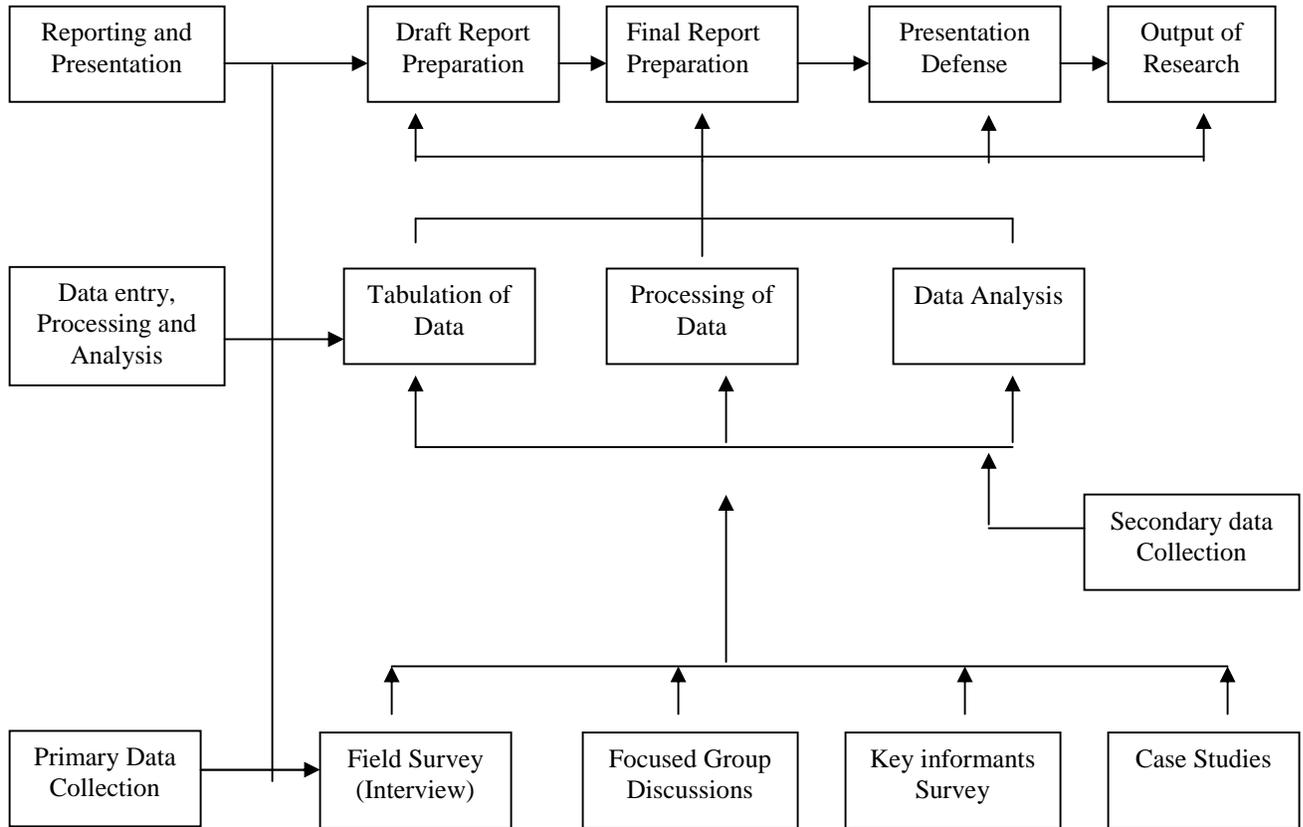
3.7.2 Tabulation of Data

The completed questionnaires were rechecked in the field each day so that the missing information could be obtained on the spot. All the completed questionnaires were tabulated in systematic way for representation of the samples.

3.7.3 Data Entry, Processing and Analysis

For data analysis, desk analysis was conducted first. The data analysis consists of coding and entered into the computer software simply designed by the researcher. Some information was analyzed manually. Simple statistical tools such as mean, percentage, frequency, pie-chart, graph, trend analysis and bar diagrams were employed during the data analysis. The analysis was performed through cross tabulation wherever necessary in order to explore the relation between different variables. Qualitative data was checked through focus group discussions, accidental interview and key informant survey. The valuable points, issues, statements were picked up from the qualitative data to supplement and complement other data sources to draw conclusions and recommendations. Also, the national aggregated data was compared to the field data in order to explore the ground reality of the community forestry management in the study area.

Figure 2: Schematic frameworks for data analysis



CHAPTER IV
INTRODUCTION TO STUDY AREA

4.1 The General Background of Lalitpur District

Lalitpur is the adjoining district of the capital city Kathmandu. The topography of this district ranges from low mountains to middle mountains (457 to 2831metres from msl). The population of this district is 0.3 million where 50 percent of them are economic active. About 45 percent of the economic active population is engaged in agriculture. Only 32.6 percent of total land (39,267 ha) is cultivated (DDC Profile, 2004). The following table shows the distribution of land according to topography.

Table 1: Distribution of Land According to Topography

Physical Condition	Agriculture		Pasture	Forest	Others	Total
	Cultivated	Non-Cultivated				
Hill/Mid Mountain	12,585	4,779	87	20,722	793	38,966
Plain/Siwalik	208	88	0	5	0	301
Total	12,793	4,867	87	20,727	793	39,267

Source: District Development Profile of Nepal, 2004

According to the 2005 projection the total population of Lalitpur district is 376, 209 with 192,072 Male and 184,137 is Female. There are 104 total household and the average household size is 5.46.The literacy rate of district is 70.77 percent and population density is 977 inhabitants per sq.km. The following table shows the demography of district.

Table 2: Population Characteristic of lalitpur District

Particulars	2005 Projection
Total population	376,209
Male	192,072
Female	184,137
Sex ratio	104
Total Households	76,762
Average Households Size	5.46
Literacy Rate%	70.77
Population Density Per Sq. km	977

Source: District Development Profile of Nepal, 2004

4.2 Biophysical Condition of Bishankhunarayan VDC

The study area patlemuldol community forest is located at ward No. 8 and 9 of Bishankunarayan VDC of Lalitpur district. This VDC is situated from 27°40'00" to 27°45'00" North latitude and 85°20'00" to 85°30'00" East longitude. Lamatar VDC of the same district lies in the north-east, Godamachaur VDC in the north-west, Godavari VDC in south and Ryale VDC of Kavre district in the south east from the study area. The altitude of this VDC ranges approximately from 1200 to 1700 meters above the mean sea level (msl). The total area of the VDC is approximately 6 sqkm. The location map of the study area is given in annex II.

4.2.1 Climatic Variability and Rainfall Characteristics

The study area is located in the hilly region within Lalitpur district where the climate is sub-tropical. The weather of the VDC is hot in summer and cold in winter. The 2005 climatic record showed that the temperature was between 17.3°C - 29.7°C and 1.2°C - 21.5°C in summer and winter respectively. The prevailing wind of monsoon brings rainfall in summer season. The average rainfall was noted 1800 mm in 2005 (VDC Profile 2005).

4.2.2 Forest Coverage

Forest is the main source of obtaining fuel, fodder, medicinal herbs and construction materials for the households. It is estimated that forest supplies almost all the fuel requirements. In the VDC, 2.6 percent of total land area is covered by government forest and 0.1 percent by community forest. The major tree species are chilaune (*Schima wallichii*), katus (*Castanopsis sps*), Utis (*Alnus nepalensis*), Dudhilo (*Ficus nemoralis*) and so on. The mixed forest type of natural and plantation forest of Patlemuldol is divided into 2 blocks and 6 sub-blocks. In addition to providing forest resources to locals, this forest is serving recreation spots as famous picnic area which adds aesthetic value. Some Non-Timber Forest Products like *Dhairo* and *Rudilo* are also found in the area.

4.2.3 Land Use Pattern of the VDC

Out of the total land of the VDC, 49.5 percent land is covered by agricultural land and 47.0 percent by bushes, 2.7 percent is covered by forest and the rest 0.8 percent area is used for settlement. The table 3 below shows the land distribution pattern of the VDC.

Table 3: Area by Land Use Pattern at Bishankhunarayan VDC

S.N.	Land use	Area in ha.	Percent
1.	Agriculture Area	337.00	49.5
2.	Bush land	318.00	47.0
3.	Forest area	18.00	2.6
4.	Settlement area	5.71	0.8
5.	Community forest	0.79	0.1
	Total	679.5	100.0

Source: VDC Profile, 2005

4.2.4 Population of the VDC

The total population of Bisankhunarayan VDC is 4526, where 2240 are males and 2286 are females. Patlemuldol CF is situated in ward No. 8-9 of Bisankhunarayan VDC. Generally, population in between the age of 15-59 is considered economically active in Nepal. It means that below 15 and above 60 year age group is considered dependent population.

Table 4: Age and Sex composition of the VDC

Age-group	Male	Percentage	Female	Percentage	Total	Percentage
0-4	196	8.75	181	7.91	377	8.32
5-9	301	13.43	264	11.54	565	12.48
10-14	303	15.52	243	12.81	596	13.16
15-19	262	11.69	271	11.85	533	11.77
20-24	189	8.43	230	10.06	419	9.25
25-29	169	7.54	204	8.92	373	8.24
30-34	177	7.90	180	7.87	357	7.88
35-39	137	6.11	158	6.91	295	6.51
40-44	114	5.08	102	4.46	216	4.77
45-49	78	3.48	76	3.32	154	3.40
50-54	59	2.63	82	3.58	141	3.11

55-59	75	3.34	58	2.53	133	2.93
60+	180	2.0	187	2.04	367	2.01
Total	2240	100.0	2286	100.0	4526	100.0

Source: VDC Profile, 2005

The table above shows that 57.96 percent population is economically active. However in the field observation it was found that the age below 15 years old children provide crucial assistance to their parents for domestic task (carrying water, cleaning house, clothing, cooking, gathering fodder, carrying firewood and so on).

4.2.5 Caste/Ethnicity composition of VDC

The Bisankhunarayan VDC is heterogeneous in term of caste/ethnic composition. The inhabitants include Brahmin (3.11%), Chhetri (55.63%), Tamang (15.39%), Newar (2.85%), Mager (5.05%) Gurung (0.28%), Sarki (6.69%), Sanyasi (5.05%), Damai (2.01%), Garti/Bhujel (2.66%), Thakuri (0.22%), Psawan (0.17%), unidentified (0.70%) and others (0.33%).

Table 5: Caste/Ethnic composition of the VDC

Caste	Population	Percentage
Magar	204	4.50
Chhetri	2518	55.63
Brahmin	141	3.11
Garti/Bhujal	17	2.66
Tamang	679	15.39
Newar	129	2.85
Gurung	13	0.28
Sarki	303	6.69
Kami	119	2.62
Thakuri	10	0.22
Sanyasi	229	5.05

Domain	91	2.01
Paswan	8	0.17
Unidentified	32	0.70
Others	15	0.33
Total	4526	100.0

Source: VDC Profile, 2005

4.2.6. Education status of the VDC

Education is a main factor of socio-cultural and economic changes in a society. The Government established 4 primary and 1 lower secondary school in Bisankhunarayan VDC i.e. shrikrishna primary, Tulsa Devi primary Bisankhunarayan primary, Patlechhap primary, Chapachhap primary school and phulchowki lower secondary school. At present regular student in primary school has 40-50 and lower secondary school has 202. After completing the lower secondary education, students need to go to Lagankhel area for secondary and above education. The literacy status of the VDC is presented in table below.

Table 6: Literacy Status of the VDC

Level of education	Male	Percentage	Female	Percentage	Total	Percentage
Illiterate	308	13.89	1048	45.38	1356	29.96
Read only	97	4.37	95	4.11	192	4.24
Literate	1804	81.37	1159	50.19	2963	65.46
Not stated	8	0.36	7	0.30	15	0.33
Total	2217	100.0	2309	100.0	4526	100.0

Source: VDC Profile, 2005

4.3 The Patlemuldol Community Forest

The research unit "Patlemuldol Community Forest" was handed over to users group in 2052 B.S. It lied in the ward No. 8 and 9 of Bisankhunarayan VDC of Lalitpur district and 64 households are involved. Brahmin, Chhetri, Newar and Tamang are the major caste groups and cover nearly 0.79 hectares of forest land.

The key informants of the village reported that they themselves had managed the forest before its Nationalisation in 1957. During that time the density of population was very thin and resources were abandoned. So there was no higher demand of forest products. Nowadays, the population growth has the direct effects on forest resources and is not enough to fulfil their household need. The people of this area are much aware on practices community forestry management and the policy of government since the forest was already handed over to the users.

4.4 The Caste/Ethnic Composition of Users

The FUGs is combined by four different caste/ethnic compositions. These are Chhetri, Brahmin, Tamang and Newar. 20 percent falls in (20-30) age group, 17.5 percent falls in (41-50) age group and only 7.5 percent in above (51-60) age group (table 7).

Table 7: Caste/Ethnic Composition of Users

Caste/Ethnicity	Population	Percent
Chhetri	198	48.9
Brahmin	102	25.2
Tamang	75	18.5
Newar	30	7.5
Total	405	100.0

Source: CFUG Records, 2000

4.5 Age-wise Population Composition of the Users

The total users of Patlemuldol CF was found 405, where 198 are males and 207 are females. Patlemuldol CF is situated in ward No. 8-9 of Bisankhunaryan VDC.

The table below shows that 56.39 percent population is economically active. However in the field observation it was found that the age below 15 years old children provide crucial assistance to their parents for domestic task (carrying water, cleaning house, clothing, cooking, gathering fodder, carrying firewood and others).

Table 8: Age-wise Population Composition of the Users

Age-group	Male	Percentage	Female	Percentage	Total	Percentage
0-4	27	13.63	28	13.52	55	13.58
5-9	21	10.60	20	9.66	41	10.12
10-14	29	14.64	32	15.45	61	15.06
15-19	20	10.10	19	9.17	39	9.62
20-24	16	8.08	20	9.66	36	8.88
25-29	11	5.55	16	7.72	27	6.66
30-34	15	7.57	15	7.24	30	7.40
35-39	13	6.56	15	7.24	28	6.91
40-44	10	5.05	10	4.83	20	4.93
45-49	12	6.06	12	5.79	24	5.92
50-54	9	4.54	8	3.86	17	4.19
55-59	8	4.04	6	2.89	14	3.45
60+	7	3.53	6	2.89	13	3.20
Total	198	100	207	100	405	100

Source: CFUG Records, 2000.

4.6 Religion of Users

Users of patlemudol consists with the two types of religion i.e. Hindu and Buddhist. Majority of users were associated with Hinduism (74.07%) followed by Buddhism (25.9%). The total population of Patlemuldol CF users is 405 among of them 94.07 percent are Hindu and 25.9 percent are Buddhist. The religion distribution is shown in the table 9.

Table 9: Religion of Users

Religion	Population	Percent
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Hindu	300	74.07
Buddhist	105	25.9
Total	405	100.0

Source: CFUG Records, 2000

In the field work sampled households are 40, among them 34 respondents are chettri and Brahmin and 6 respondents are Tamang and Newar, Chettri and Brahmin are Hindu followers and Tamang and Newar are Buddhist followers. However, during the field visit and interaction with local users, the researcher found harmonious relation between two religions. No religion specific discrimination in terms of forest resource collection and management has been noted.

4.7 Education Status of Users

A simple majority of the users (53.1%) were found literate, who could able to read and write and 46.9 percent are illiterate. Among the users 12.1 has got above the S.L.C. level of education (table 10).

Table 10: Education status of users

Level of education	Male	Percentage	Female	Percentage	Total	Percentage
Illiterate	80	37.7	110	56.9	190	46.9
Literate	56	26.4	29	15.0	85	20.9
Up to 10	49	23.2	32	16.6	81	20.1
Above SLC	27	17.7	22	11.5	49	12.1
Total	212	100.0	193	100.0	405	100.0

Source: CFUG Records, 2000

4.8 Landholding Status of Users

Land is the main source of livelihood of the villagers which is divided into Khet (irrigated low-land) and bari (un-irrigated up-land) on the basis of irrigation facility (table 11).

Table 11: Landholding Size of Users

Landholding	Type of land
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size in Ropani	Khet		Bari	
	Household	Percent	Household	Percent
1-3	32	50.0	25	39.0
3-5	15	23.4	22	34.3
5-7	10	15.7	12	18.7
7-10	7	10.9	5	7.9
Total	64	100.0	64	100.0

Source: CFUG Records, 2000

CHAPTER V
SOCIO-CULTURAL AND ECONOMIC CHARACTERISTICS OF
PATLEMULDOL COMMUNITY FOREST USERS

This chapter highlights the socio-cultural and economic natures of the respondents. The age group, education and ethnicity of the respondents is analysed. The economic characteristics of the respondents are dealt with greater emphasis on agriculture, livestock and their occupation.

5.1 Age of the Respondents

Among the respondents 55 percent respondents found having age group between 31-40 years, and 20 percent falls in 20-30 years. Similarly 17.5 percent falls in 40-50 years and only 7.5 percent were above 50-60 years age group.

Table 12: Respondents by Age Group

Age Group	No. of Respondent	Percent
20-30	8	20.0
30-40	22	55.0
40-50	7	17.5
50-60	3	7.5
Total	40	100.0

Source: Field survey, 2007

Above age group people were very much interested on forest management and played vital role for protection and distribution of forest resources to the users. The details of the respondents age group is provided in the table 12.

5.2 Caste/Ethnicity

The below table shows, 60 percent of respondents were belong to Brahmin which is considered as upper caste group according to our Nepali caste system.

Table 13: Respondent by Caste/Ethnicity

Caste/Ethnic Group	No. of Respondent	Percentage
Brahmin	24	60.0
Chhetri	10	25.0
Newar	1	2.5
Tamang	5	12.5
Total	40	100.0

Source: Field survey, 2007

The second majority of the respondents belong to Chhetri (25%) and rest of the respondents were Tamang (12.5 percent) and Newar (2.5 percent).

5.3 Education Status of Respondents

The average literacy rate of the Patlemuldol community was 62.3% whereas the VDC average was a bit higher (81.37%). The educational status of the respondents is analysed in the table below.

Table 14: Educational status of respondents

Level of Education	No. of Respondent	Percentage
Illiterate	9	22.5
Literate	14	35.0
Up to SLC	11	27.5
Above SLC	6	15.0
Total	40	100.0

Source: Field survey, 2007

Majority of the respondents (77.5%) were found literate and 22.5 percent illiterate. Comparatively male were literacy was higher than female. Among the all, 15 percent were above SLC and 27.5 percent to below SLC (table 14).

5.4 Economy

Economy indicates production, consumption and distribution of goods and services in the community. The economy of Patlemuldol community is largely depends on the agriculture and livestock rising. Besides agriculture they occupied small business and services in governmental and non-governmental sectors.

5.4.1 Agriculture

Patlemuldol area does not have enough irrigated land (khet). Small portion of land is irrigated by Godavari River. Therefore most of land is not irrigated (Bari). The main crops grown in the bari includes Rice, Maize, Millet, Ginger, potato and so on. In the irrigated land (khet) people grown paddy, wheat, maize, mustard, and other green vegetables. Agriculture calendar begins from March-April and ends in November-December. The table 15 shows the farming calendar including all agricultural activities.

Table 15: Farming calendar and agricultural activities of study area

Crops	Land preparation period	Manuring period	Planting /sowing period	Weeding period	Harvesting period
Paddy	May-June		June-July	July-Aug	Oct-Nov
Maize	Feb-Mar	Feb-Mar	Feb-Mar	Apr-May	June-July
Millet	Apr-May		June-Aug		Nov-Dec
Wheat	Nov-Dec	Nov-Dec	Nov-Dec		March
Mustard	Aug-Oct	Aug-Oct	Sep-Nov		Jan-Feb
Potato	Oct-Nov	Oct-Nov	Oct-Dec	Nov-Dec	Feb-Mar
Black lentil	August		August		Nov-Dec

Source: Field survey 2007

The above table show that farmers usually plant different kinds of crops in their land throughout the year. Generally the farmers plant maize in February and harvest in June and July and they plant paddy in the same land in June and July and harvest in between October-November. They also plant mustard or wheat in the same field.

Agriculture is the main occupation of the villagers. However, they cannot produce sufficient food due to the small piece of land and lack of irrigation facility. The following table shows the food sufficiency situation of Patlemuldol community.

Table 16: Household Food Security Status of the Respondents

Food sufficiency	Households	Percentage
Less than 3 month	3	7.5
4-6 month	10	25.0
7-9 month	12	30.0
10-12 month	8	20.0
12+above	7	17.5
Total	40	100.0

Source: Field survey 2007

About 82.5% of the farmers do not produce sufficient grains to meet their annual foods requirements whereas very few households (17.5%) produce enough food grains throughout the years. Due to the lack of enough food most of the villagers were found involved in other activities such as small business and private sector employment to fulfil their daily needs.

Table 17: Monthly Household Incomes of the Respondents

Source Income	Income (NRS)	No. of HH
Wage labour	0-2000	2
Agriculture	2000-4000	25
Business	4000-6000	3
Services	6000-8000	10
Total		40

Source: Field survey, 2007

Above table 17 clearly shows, wage-labour, agriculture, small business and services were the main sources of their livelihoods. Both male and female were found involved in agriculture wage labour. The rate of payment was varied according to sex. The male got NRs 150 and female got NRs 80. Despite the agriculture labour male sell their labour in other non-agriculture activities such as carpentry, house construction and others.

25 respondents surveyed reported they earn NRs 2000-4000 per month from agriculture. The major vegetables crops they cultivated were cabbage, tomato, radish, carrot, cauliflower, mushroom, and potato in the irrigated land.

Similarly, 3 household were involved in business. Among them, 2 household run groceries which supply essential items such as kerosene oil, spices, tea, sugar, salt, and other essential of daily needs and 1 household have small tea shop. Likewise, ten households have been found involved in service sector. Among them 4 household involve in teaching in the local public school, 3 household were found to involve in driving and 3 household were involve in NGO services.

The landholding size of the respondents of the respondents was found nearly less by half in compare to the VDC average. The average agriculture land size of the respondents was 6.75 ha/HH, whereas the VDC average was 9.3 ha.

Table 18: Agriculture Landholding Size of Respondents

Caste/ Ethnicity	Respondent	Type of land				Land in Ropani	%
		Khet	%	Bari	%		
Chhetri	10	7	50.0	2	15.4	9	33.4
Brahmin	24	3	21.4	7	53.8	10	37.0
Tamang	5	2	14.3	2	15.4	4	14.8
Newar	1	2	14.3	2	15.4	4	14.8
Total	40	14	100.0	13	100.0	27	100.0

Source: Field survey, 2007

The table 18 shows that the Chhetri and Brahmin people hold 33.4 and 37 percent of agriculture land followed by Tamang and Newar 14.8 percent respectively. Despite agriculture, the people also involved in different other economic activities such as service, business, and wage labour.

5.4.2 Livestock

Animal husbandry is another major source of income of people of my study area. In Patlemudold almost all people raise cattle, such as cows, oxen, buffaloes, goats and pigs. The following table shows numbers of cattle and their types they raised in the study area.

Table 19: Distribution of Livestock among the Respondents

Name of animal	Number	Percentage
Buffalo	20	0.5
Cow	28	1.0
Oxen	6	0.1
Goat	100	2.5
Pig	5	0.1
Total	159	4.0

Source: Field survey, 2007

The main purpose of rearing these animals is to getting farm yard manure, milk, meat, and draft power to plough land and other income generating activities. Above table shows that people of study area gave more priority to the goats, than the other cattle. It was also informed that goats were staple source of cash income. Similarly, it was also found that goats were also a main source of meat and manure for Patlemudol people. Similarly, the respondents also informed that less fodder was required for goat as compared to cow and buffalo. Similarly the respondents gave priority to the buffaloes and cows for milk and manure also.

5.4.3 Occupational Status of Respondents

The majority of the respondents of Patlemudol community were found depends on farming, however, other occupations like services and business sector were also their source of livelihoods.

Table 20: Occupational Status of Respondents

Occupation	No. of Respondent	Percentage
Agriculture	25	62.5
Service	10	25.5
Business	3	7.5
Wages	2	5.0
Total	40	100.0

Source: Field survey, 2007

The table 20 above shows that 62.5 percent people were involved in agriculture in study area. Similarly 25.5 percent people involved in service and 5 percent people were depending on wage for their livelihoods.

CHAPTER VI

WOMEN'S PARTICIPATION IN COMMUNITY FOREST MANAGEMENT

6.1 Women's Participation on Constitution and Operational Plan Development

It was found that the people of the study area depended upon the forest resources for their livelihood. They had made rules and regulations to manage forest which is known as constitution and operational plan. In beginning, CF constitution and operational plan was formulated in the presence of local people with the help of district forest office. According to respondent at that time all the users involved in this process were male. They made an operational plan for forest management, plantation, thinning and pruning, collection of fodders, leaf-litter and firewood. Within the field visit it was found that all the users had followed the rules and regulations strictly. In anybody went against the rules and regulation, he/she will be punished.

6.2 Role of Women in Management of CF Fund

The fund of CF came from the entry fee, picnic spot fee, punishment fee, donation and others, which was kept in the bank account with the joint signature of secretary and treasurer. Women presently heads the position of treasurer of CF. They normally found to using the fund to manage the forest and other local development activities. It was reported that found deposited presently was NRs. 60,500. The 75 percent of found they was gone to local development activities such as village road construction, temple repairing, and school building repairing where as the rest 25 percent was used for forest management initiatives.

6.3 Women Participation in General Assembly

Participation in the general meeting or assembly is one of the major factors which lead to the decision making. The major decisions about CF management are done in this meeting. The members of the users group said that there was less participation of women in such meetings due to their busy schedule in their household activities.

Table 21: Male and Female Attendance of General Assembly

F/Y	Total HH	Total Population	Participation of female	Percentage	Participation of male	Percentage	Total
53/54	60	200	40	40.81	58	59.18	98
57/58	60	250	55	47.41	61	52.57	116
61/62	60	300	72	47.36	80	52.63	182
63/64	64	405	94	48.20	10	51.79	195

Source: Field survey, 2007

The general assembly takes place once in a year. The highest women's participation was obtained in F/Y 2063/64 (48.20 %) and it is in the increasing trend at present.

6.4 Participation in Executive Committee of CFUG

The executive committee members were selected through the consensus of the members at the general assembly. The UC members are nominated by the users groups themselves. The involvement of women and men in the executive committee of CF from the first formation to the present tenure is presented in the table below.

Table 22: Participation in Executive Committee (1995-2007)

Year	Male	Percentage	Female	Percentage	Total
1995	8	100.00	-	-	8
1999	9	81.81	2	18.18	11
2003	11	68.75	5	31.25	16
2007	9	69.23	4	30.77	13

Source: Field survey, 2007

Above table shows that women participation in CF executive committee was relatively lower as guided by the CF policy. The policy clearly mentioned that 33 percent women must be present in CF executive committee but only 31.25 percent is obtained here. The members of the users group said in group discussion "we were less educated than the male and we don't have time to go official work due to the household chores." This is the main cause of lower participation of women in Pathlemuldol CF.

6.5 Participation in Plantation Activities

It was reported that plantation activities were done twice at this community forest after its handing over to the CFUG; first in 1998 and second in 2002. It was done in the barren land of the forest. The major species planted were chilaune (*Schima wallichii*), katus (*Castanopsis*), Harro (*Terminia chebula*), Utis (*Alnus nepalensis*), and Dudhilo (*Ficus nemoralis*).

In the study area, community forest plantation was usually done in June and July. They informed that it was normally done by both sexes. However, male were engaged to prepare the bed for planting the seedling and bringing it from the nursery to plantation area whereas women were found to be highly involved in plantation activities. According to field survey, it was found that 60 percent of women were found participated. The women's participation in plantation activities was determined by age and level of education and caste/ethnicity which is described in the following heads.

Box 2: Gokarna Puri; a witness for Forest Management at Bisankhunaryan

Gokarna Puri has been living in Bisankhunaryan VDC for more than five decades. As researcher asked to him about forest management, he told that in earlier time the forest was very dense, population was less. Before six-seven years as population increases, the demand of forest resources is high, resulting people used forest resources even illegal ways. The condition of forest became worse. But nowadays, the people of these areas are aware on practices the community forest, forest policy of the government as it was handed over the local people in 2052 B S.

6.5.1 By Age

Table 23: Respondent Participating in Plantation by Age

Age group	Yes		No		Total	
	No of HH	Percentage	No. of HH	Percentage	No. of HH	Percentage
20-30	6	15	2	5	8	20
30-40	17	42.5	5	12.5	22	55

40-50	1	2.5	6	15	7	17.5
50-60	0	0	3	7.5	3	7.5
Total	24	60	16	40	40	100

Source: Field survey, 2007

Above table shows that 23 percent women were participated having age between 30-40 years. It was highest participation in plantation among different age groups. And there was least participation of women (7.5%) having 50-60 years of age.

6.5.2 By Education

Table 24: Respondent Participating in Plantation by Level of Education

Education	Yes		No		Total	
	No. of HH	Percentage	No. of HH	Percentage	No. of HH	Percentage
Illiterate	0	0	5	22.5	9	22.5
Literate	11	27.5	3	7.5	14	35.0
Up to S.L.C.	9	22.5	2	5	11	27.5
Above S.L.C.	4	10	2	5	6	15.0
Total	24	60	16	40	40	100

Source: Field survey, 2007

It was recorded that a greater majority of literate users (77.5%) have participated as compare to illiterate (22.5%). This could be the positive impact of education on awareness building on CF management.

6.5.3 By Caste/Ethnicity

Table 25: Respondent Participating in Plantation by Caste/Ethnicity

Ethnicity	Yes		No		Total	
	No. of HH	Percentage	No. of HH	Percentage	No of HH	Percentage
Brahmin	20	83.3	4	16.7	24	60
Chhetri	2	20.0	8	80	10	25

Newar	2	33.3	4	2.67	6	15
Total	24	60	16	40	4400	100

Source: Field survey, 2007

From the above table it seems that out of total respondents, 60 percent were found participated in plantation activities. Furthermore, out of the 60 percent participation, 83.3 percent were Brahmin, 20 percent were Chhetri and 33.3 percent were Newar.

6.6 Participation in Forest Harvesting

There is restriction to collect green twigs from the community forest even though the community forest is open for the user group for collecting dry twigs. Normally, they collected firewood in winter (December – January). Similarly, they also used straw of maize and wheat as firewood as substitute of forest based fuel for cooking.

In the study area, women's involvement was found relatively higher than male for harvesting of forest products. The respondents informed that firewood collection was the key task of women in a household. Cooking is generally taken as the women's sphere in household. The table below shows the involvement of women in forest harvesting at Patlemuldol CF.

Table 26: Women Participating in Forest Harvesting

Sex	Firewood		Leaf Litter		Fodder	
	No.	Percentage	No.	Percentage	No.	Percentage
Female	26	65.0	36	90.0	22	55.0
Male	4	10.0	-	-	7	17.5
Both	10	25.0	4	10.0	11	27.5
Total	40	100.0	40	100.0	40	100.0

Source: Field survey, 2007

It was found that 65 percent women interviewed were involved in harvesting where as only 10 percent male were involved. Leaf-litter collection was found the main working sphere of female in the study area. It was found 90 percent of women were actively involved in leaf-litter collection and the rest were male. They reported that, children also helped them to collect leaf-litter. However, girl children were found higher than boy.

Similarly, in fodder collection women were found highly involve than men in the study area. However, men collected fodder for their livestock only in the absence of women in the family. Children were also involved in collecting fodder.

6.7 Participation in Thinning and Pruning

In the study area, the thinning and pruning activities are normally done in November and December. It was held every year for the well growth and betterment of the seedling. All the user members of community forest participate. After thinning and pruning, the removing parts of the tree were collected in certain place. After that, each of the participants gets those parts in equal bases. The user members who did not participate in thinning and pruning activities had no access to those resources. Children under 12 years old were not allowed to participate. Males were engaged in supervision of thinning and pruning activities whereas females were found involved in removing the useless parts of the trees. It was noted that female participation was relatively found higher in this activity because they could get firewood during this time which was the main duty of women within a household.

CHAPTER VII

MOTIVATIONAL AND HINDERING FACTORS FOR WOMEN'S PARTICIPATION

7.1 Motivational Factors for Women's Participation

In this study, following 5 alternative factors was given for selection about the motivational factor that motivates them to involve in community forest activities. Following table gives the view of respondents about the motivational factor.

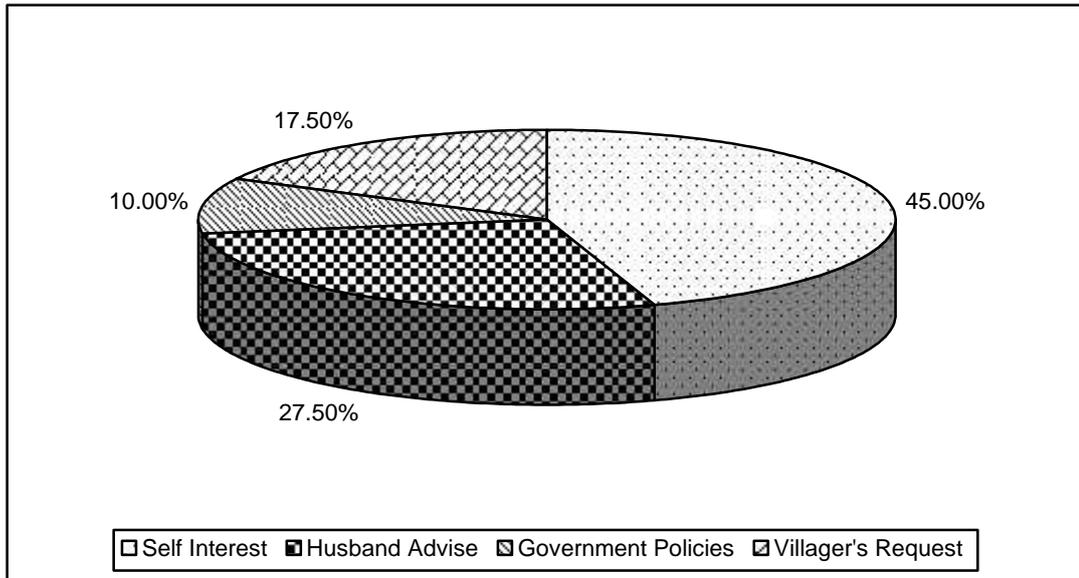
Table 27: Respondent Reporting by Different Motivational Factors

S.N.	Motivational factors	No. of respondent	Percentage
1.	Access to Resources	16	40.0
2.	Self Interest	8	20.0
3.	Villager's Request	7	17.5
4.	Husband Advise	5	12.5
5.	Government Policies	4	10.0
	Total	40	100.00

Source: Field survey, 2007

16 respondents informed that, before formation of CF the condition of forest was poor which was turning bad to worse day by day. During that time, women had to walk nearly 2-3 hours for fire-wood, fodder and leaf-litter collection. After formation of the CF, the local people took interest to manage the forest. Then the forest condition was gradually improving and become better. Consequently, the quantity of the fodder and leaf litter were also increased in the CF. Women did not need to walk to other forest to collect the forest products. And then they also gradually started to participate in forest management activity by involving in executive committee of the CFUG.

Figure 3 Distributions of Respondents by Motivational Factor



The above table and figure shows that the self- interest, husband advice and villagers' request, access of resources were more effective motivational factors to women to involve in community forest activities. I/NGOs were found fewer involved for awareness program to motivate women to involve in development activities. Looking community forest model, 45% women were motivated to involve in community forest activities. The government policy to make minimum one third female members must be in community forest user's committee to make pressure to aware women for forest management initiatives. And government policy to focus on advertises and communication about community forest model motivates for women to involve in community forestry management.

7.2 Hindering Factors for Women's Participation

Women are the main users of forest resources in the study area. Therefore, forest is the integral part of women's life. Similarly, women have vast knowledge about the multiple benefit and usefulness of forest resources. They argue that forest makes the desert green, helps to protect landslide and helps to increase the sources of water. So it seems that women have vast knowledge of forest and their roles more beneficial for forest management. However, some constraints play vital role in hindering the women's participation in community forest. The main obstacles of women's participation are briefly mentioned in the following topics.

7.2.1 Low Level of Economic Condition

Economic condition always plays a fundamental role in forest management. If the people economically required forest products, they can participate for the betterment for forest management. Because of the low level of income they have to be engaged subsistence economy. Particularly, females think the forest as a source of firewood, fodder, and leaf-litter and extract forest product for household activities.

7.2.2 Illiteracy

About 22.5 percent women were illiterate in the study area. Due to their illiteracy, they hesitate to participate in public works including community forest management activities. In the course of group discussion, some women said, "we are illiterate and we do not know much on the forest management." Similarly, when the researcher observed the executive committee meeting held in the November 2007, it was found that only four women members were participated. Those women did say nothing through out the meeting. After held the meeting, I asked question to those, why were you silent in the meeting? Both of them made the ready made answer, "they are well known than we." This indicates that they have great problem due to lack of education. As result, they remain back to make decision about community forest management.

The chairperson of the committee Gokarna Puri informed that they had already send 15 users members to different training programs i.e. plantation, weeding, thinning and pruning activities organized by GOs and NGOs in different period. Among them only three were women. Why the committee did send less women to participant in the training program? Whether women themselves did not want to participate in the program or other causes were hidden behind it? To answer these questions I asked some women and all of them replied same answer, "we are uneducated and we do not understand any thing in the training". From these arguments, it is clear that lack of education is the main cause that hesitate women to participate in various training programs.

7.2.3 Timing of Meeting

8 women Reported that the meeting always starts in the morning (between 8:00 to 9:00) when they are busiest for cooking, fetching water, and feeding household members. If they participated in meeting, they must left their household works. So time is also major obstacles for women participation in CF management.

7.2.4 Traditional Male Dominated Culture

Hindu cultural was found dominated in the study area. In Hindu culture women are fixed to do household work and they have restriction to go and to stay away from the home without family permission. So this is one of the major problems for women's participation in CF management.

The aforesaid causes were not separately responsible for the low participation of women in community forest management activities. The combinations of all of the causes were main problems for women's participation.

The major hindering factors for women's' participation in CF management could be summarised by the table and figure 28 below.

Table 28: Women Reporting by Hindering Factors for Women's Participation

S.N.	Hindering factors	No. of HH	Percentage
1.	Illiteracy	10	25.0
2.	Timing of meeting	8	20.0
3.	Low level of economic condition	5	12.5
4.	Traditional male dominated culture	3	7.5
5.	Lack of technical knowledge	2	5.0
6.	Cumulative of all above causes	12	30.0
	Total	40	100.0

Source: Field survey, 2007

Among the interviewed respondents, 30 percent of them viewed that all of the above mentioned causes were the combine obstacles for women's participation in CF management. Similarly, 25 percent respondents viewed illiteracy is main obstacles for active participation for any development activities. Due to the lack of capacity to read and write, they feel humiliation and they must face many problems in active participation. Knowledge and illiteracy is little different factor because literate women also may lack of knowledge in any subject and illiterate women also may have knowledge about proper subject by their experience. And 20 percent women have reported they lacked time for the participation. Moreover, low level of economic condition (12.5%) and traditional culture (7.5%) were found women unwilling to participate in every development sector including forest management initiatives.

CHAPTER VIII

SUMMARY AND CONCLUSION

The main objective of this research was to assess women's participation in community forest management and to find out the hindering and motivating factors to their involvement. This study also tried to analyse some socio-cultural and economic characteristics of the users of Pathemuldol community forest. The different aspects of forest management i.e. CF formation, constitutional and operational plan development, general assembly, executive committee, management of CF fund and participation in plantation were analyzed.

In the study area, forest plantation activities were normally accomplished in between June and July of the year. 60 percent of women were found participating in plantation. Similarly, the forest harvesting work is usually done in winter (December to January) women's involvement is found relatively higher than male for harvesting of forest products i.e. about 65 percent in firewood collection, 90 percent in leaf litter collection and 55 percent in fodder collection activities. Male users were reported to collect forest products only in absence of female in their family. Moreover, thinning and pruning activities were done in November and December. Women involvement is found higher than the male.

In constitution and operational plan development it was found that there was a very low participation of female. Out of 30 people involved, there are only 2 female participated. All the rules and regulations about the CF are formed in constitution and operational plan development being familiar about this female are not involved about this.

About management of CF fund it was found that most of responsible persons is secretary and treasurer. Which is collected by entry fee, picnic spot fee, and donation so on? The treasurer is female. Different workshop and assembly were held periodically in order to make decision about CF but it was found that there is less participation of female due to the busy in their household activities. According to the national forest policy there must be one third female participation in executive committee of CF however it seems that in 1995 there was no participation of female out of total 8 members. In 1999 it seems that there was very low participation of

women. There were only 2 female members out of total 11 members. Similarly 2003 there were 5 female members out of total 16 members. Likewise in 2007 there were also very low participation of female in executive committee of CF; there were only 4 female members in 13 membered executive board (CFUG). Though it seems that during the period of 1995-2007 woman participation in CF executive committee was increased but it is not appropriate with the national forest policy.

On the basis of this study it is found that woman participation in CF is increased because of their self interest, their husband's advice, villager's request. The main motivation for women participation in CF is government's policy as well. However it seems that there is very low woman participation in CF according to the national forest policy. The most responsible hindering factors are their low economic condition, illiteracy, lack of knowledge. Likewise traditional male dominated culture is also most hindering factors which discourage woman to participate in CF. Presently, about 25% of the executive members of CFUGs are women. These groups have been successful in mobilizing household members in local development, and also act as accountability and public hearing platforms. About 2.5 million person day equivalent of voluntary labor is annually mobilized to undertake forest and community development, and to generate social capital in the rural areas.

The findings of this research revealed that women participation is less than men in executive committee, general assembly, constitution and operational plan development and their roles are also less effective in decision making process due to the work burden in household. Therefore, to bring the women in the mainstream of decision making process these obstacles should be gradually change or removed. Key positions such as chairman, secretary and treasures should be assigned to women. Such type of practice helps to boost up knowledge, morale and feeling of responsibility among women that ultimately will increase women's participation. In FUGs 22.5 percent women are illiterate. Thus non- formal education program could be the added benefits to the women users. The community forestry has made substantial contributions in terms of increased forest cover, as well as institutionalization of democracy at the grass roots level; however, challenges also lie in increasing the productivity of forests, and strengthening good governance for equitable sharing of benefits.

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