CHAPTER-ONE

INTRODUCTION

1.1 Background

Nepal's forests are essential for the well being of rural community's who depend on them for supplies of fuel wood, fodder, poles, timber and many other products. They also provide essential raw materials for national development and help to maintain a sound environment.

For the last two decades community forestry program has been adopted as one of the major strategies for managing country's forests. Community forestry in Nepal has become the most important programs within the forestry sector with the approval of master plan for the forestry sector in 1989, enactment of the 1993 community forestry legislation and Agriculture Perfective Plan, 1997. The local communities as forest user groups have entrusted with the responsibilities of management, development and utilization of the forest resources to their proximity. To day more than 14337 forest user groups are managing about 11,90,000 lakhs hectare of community forest in the country (DOF, 2007). The primary objective of these user groups have been fulfill the energy needs in terms of fuel, wood and number of inputs to sustain farming system along with the conservation of forest. Before emergence of CF, there were many state interventions design to enhance the greater control over forest resources and conservation of bio-diversity. Bio-diversity is totality of genes, species and ecosystems in a region (WR at 1992 Bartz 1992).

A great national and international interest is paid for the conservation of bio-diversity. Nepal began establishing a system of conservation reserves in 1979s aimed at conserving a representative sample of existing bio-

diversity by protecting representative arrays of ecosystems from human manipulation (Jackson et al., 1994). The national conservation strategy (1988) emphasizes for the protection of country bio-diversity. The master plan for forestry sector (1988-89) and the interim constitution of Nepal (2063 B.S.) have also given due emphasis in this aspect.

The community forestry program has been recognized as major strategy for the development and management of forest resource of Nepal through the user group approach. This approach has been reported to be quite effective and sustainable for meeting needs of the people for a variety of products and also restoring the forest resources in the middles of Nepal. Forestry along with the agriculture plays a central role in the economic and social life of the rural people who are 83% of Nepal's population. The majority of household in the villages depends on the forest fro their livelihood in subsistence agriculture and economy. Hence, the relation between forest, land, livestock and human are of prime importance in content of natural resources management. Thus, there are tremendous opportunities of integrating community forestry into community development activities.

The well-defined forest legislation and policies rules and regulations further facilitate for integrating the CF into bio-diversity conservation and community development. The forest legislation (1993) and regulations (1995) recognizes FUGs as self-governing and autonomous entities, which also have their own funds. It empowers FUGs to carry out all the programs in their community forests including conservation of bio-diversity and community development. Apart from this, the government has make necessary amendments in its legislation for effective bio-diversity and community development.

Apart from this, the government has make necessary amendments in its legislation for effective bio-diversity conservation and community development activities. Preparation of the detail inventory of the forest species in operation plan and provision to spend at least 25 percent of the fund generated from the CF, in forest development activities will ultimately effects on the bio-diversity situation of the country.

In spite of a vital significance of bio-diversity conservation of own existence, the community forestry program doesn't encompass potential bio-diversity conservation and community development within objectives of forest management directly.

There is a major gap in the protected area system on the altitude range of 500 to 3500m. with only 10% of existing reserves located there. It has omitted middle hill zone that contains 61 percent (3.5 million hector) of Nepal's forest including-many major ecosystems not represented elsewhere. Thus there is greater need to assess the impact of the community forestry on bio-diversity conservation and community development activities in hilly region of the county.

Therefore, the study is hereby proposes to assess the forest condition after implementing the community forestry activities and people's attitude on bio-diversity conservation and community development through community forestry.

1.2 Statement of the Problems

Community forestry development in Nepal is an approach, which enables community or more exactly user group to direct the establishment and sustainable management of their local forests for their own benefit.

Forest is a renewable natural resource, which provides a wide range of socio-economic, environmental and cultural "benefits & services". The rural people are dependent on forest for various products to fulfill their basic needs such as fuel wood, fodder, leaflitter, fruits, herbs and to provide other services that are essential for the farming system as syatt-smith (1982) has suggested that 2.8 hectares of accessible forests are required for sustaining each hectares of farmland.

User groups protect and manage forest in order to satisfy their own needs particularly these relating the supply of forest products. Living at subsistence level and practicing agriculture to survive rural communities in Nepal can't afford the luxury of bio-diversity conservation for its own sake. To them, the forest to be community forest or national forest, is a resource to be utilized, or to be preserved for future use. They have noticed that, the broad range of products (both timber and non-timber available and in regular use from community forest areas will encourage user groups to manage their forest to continue natural diversity. But some management practices adopted by FUG's may have a negative impact on bio-diversity and positive impact on community development i.e. rural livelihood.

Community forestry provides practical means to conserve bio-diversity outside the protected area network in the mid-hills region of Nepal is significantly rich in both flora and faunal diversity; it is not an expectoration to the problem of bio-diversity loss. The situation may be even worse here because of the combination of human factors and fragile mountain environment. It is believed three species of mammals; eleven species of birds and nine species of plants have already become extinct from Nepal. A number of floral and faunal species are also categorized to be endangered spp. to Nepal (BPP, 1995).

The loss of bio-diversity is a natural phenomenon to the country like Nepal is occurring at all levels viz. Genetic ecosystem and species levels. Numerous human activities have accelerated the rate of extinction by many folds. In developing countries, the human factors that contributed for loss of bio-diversity are considered to be population growth, poverty misconception, cultural transitions, economic and political implementation (Saulo, 1991).

Realizing this fact legal framework has been promulgated to embrace local people involvement to manage forest. There are many observations indicating improvements in bio-diversity and wildlife habitat during the past protection phase of community forestry where shrub land has been converted into forest. For the long-term management of community forests it is necessary that scientific management that benefits local people are encouraged. This is stated clearly in the ninth-five years plan 91997-2002_ and is also clarified in the forest act of 1993. Bio-diversity conservation should, there, ideally begin from community development activities. The management operations carried out by the FUGs are being helpful for better forest condition. Measures for promoting natural as well as artificial regeneration and application of different treatments in favour of useful crop have resulted significant positive impact to increase the number of plant species of herbs, shrubs and thorny bushes favouring open forest naturally as well as artificially. Numbers of wild animals have been increased with the improvement of forest condition. As discussed earlier, the me several activities implemented by the users may have both positive and negative effects to the biodiversity and well as the community development. Removal of the dead tree may help to users to initiate the community development activities and on the other way in may destroy the habitat of the wildlife. Hence, the community

development and biodiversity can not be separated while we consider about community forestry.

There is continuous hand to mouth problems for subsistence formers, so people have very limited time and environment to think about the bio-diversity and intensive community development works for their benefit. So the efficient management of community forestry is questionable and thus the impact should have to be analyzed to strengthen and promote the efficiency of forest user groups.

Community forestry, in general, is a small scale village level forestry practice where decisions are often made on a communal basis and where rural people participate in various activities and receive major portion of socio-economic and ecological benefit from the forest. In the present context, it is going in contrast to the aims and objectives of community to raise the economic status of the poor and disadvantaged people in this area. This study aims to address the following questions.

- What are the problems of FUG in managing community forest?
- Are community forestry really supporting Gender and participation in the bio-diversity conservation?
- Is community forestry supportive for community development activities?
- What are the impacts of community forestry-in the rural people?

1.3 Objectives of the Study

1.3.1 General Objectives

The general objectives of the study is to assess the impact of community forest on bio-diversity situation and community development activities in Salleri Community forest Amarpur, Panchthar.

1.3.2 Specific Objectives

Following specific objectives are proposed to fulfill the above mentioned objectives.

- To identify the status of forest species diversity after implementing the community forestry activities.
- To find out community development activities initiated by forest user groups.
- To find out people's attitude on bio-diversity conservation and community development activities through community forestry program.

1.4 Justification of the Study

A major success of the community forestry is the improved protection and conservation of forest resources. Many community forests, which have been under community management for some time, are now re-established and matured. However, in several cases the commercially potential of this matured forest is not being utilized and the forest becoming 'Jungle' rather than managed forest. This also means that a congested forest results in lower productivity and loss of potential income. Many factors contribute to this state of affairs.

Community forestry system in Nepal is not in a track because of diverse strategy of implementation in different districts. Nowadays, the community forestry through user groups is the most viable strategy for forest management of hill forests by operational plan in Nepal (Gilmour and Fisher, 1991). The current forest act (1993) is about bio-diversity conservation within the community forestry program (Chhetri, 1997). It has only focused on fulfilling the daily need of the forest products for the local people in the view of getting their generous involvement in management of local forests.

The community forestry is directly linked with rural people livelihood, its activities cannot be separated from the community development activities. So the underlying issues in the integration of bio-diversity into resource management to develop in a broad sense and associated with the aspects relating to local communities because local communities have been informally engaged for generation in the management of forest bio-diversity promptly for human survival. Hence based on the aforementioned issues, there is grater need to identify the impact of the community forestry on biodiversity conservation and community development activities. Efforts should be made to identify the areas where community forestry is affecting on bio-diversity conservation and community development. If we focus on bio-diversity only, then we would be tackling only half impact of the community forestry. exactly this is the area where Nepal's community forestry program needs to look into, if it is to help rural people in improving their access to and control over forest resources along with national goal of poverty alleviation.

This research will be helpful for further planning, research and monitoring to districts level. This research was done realizing the fact that forest is renewable natural resources in development and is always with

people throughout their life. Without forest, there will be problems on bio-diversity (Species level, ecosystem level, genetic level) as well as community existence in the world.

1.5 Organization of the study

This study has been organized into seven chapters. Chapter one deal with introduction, statement of the problems, objectives, justification of the study and organization of the study. Review of the available literature on community forestry, bio-diversity conservation and community development efforts in Nepal, conceptual framework of the study and definition of variables and key terms are teken account in chapter two. Chapter three covers the research methodology. Chapter four presents general description of the study area. Chapter five deals with the socio-economic features of Salleri community forest user group. The impacts of community, forest are presented in chapter six whereas, chapter seven presents summary, conclusions and recommendation as well.

CHAPTER-TWO

LITERATURE REVIEW

Some literatures of scholars and researchers have been reviewed in order to know about the existing status of community forestry in Nepal.

Community forestry is not just special technology but rather a process of socio-economic changes that requires continuous participation of the community in planning implementing and problem solving. Thus community forestry to be initiated both each government land and community land involves people in all stages from decision making to harvesting (Kayastha, 1991).

In early days, local people employed watchers to protect the nearby forest for satisfying the domestic needs (Fisher, 1989) however degradation of the forest resources continued. The promulgation of National Act 1975 adn subsequent failure of management efforts turned forests into the open access resource with tendency of free side among the villagers (Sharma, 2000). After the nationalization, the forest were massively destroyed all over the country. Three decades after nationalization of the forest government of Nepal lacks human, financial and other resources needed to put all accessible forest under proper management, or even just to protect them from exploitation.

After a longtime, National Forestry Plan 1976, (Anonymous, 1982) with the objectives restoration of nature balance, economic mobilization scientific of community forestry in Nepal i.e. emphasized people's participation in forestry activities.

Forestry Act 1961, was amended in 1978 to incorporate the provisions of Panchayat and Panchayat protected forest. However, the act failed to produce desired result as the managerial responsibility of the forest lied with the local political entities called Panchayat which is now termed as Village Development Committee (VDC). It also become failure to recognize the proper identification of traditional and real use rights, so it neither contributed to an efficient management nor ensures effective people's participation in forestry activities. However, changes in forest management became gradually evident after the implementation of forestry sector Master Plan in 1988. The plan for focused on achieving people's basic needs for various forestry products, increase income at village level, and conserve natural ecosystems and genetic resources by maintaining a safe and wholesome environment (Sharma, 2000).

Later in 1990, the PFs and PPFs were changed to community forest managed by forest user groups (FUGs). Community forestry was originally conceived to protect forest and to fulfill the basic needs for forest products of the local population. It (CF) was closely linked to the a forestation program, and both programs were to be implemented in the gills to meet the urgent need of people for forest products like timber, firewood and fodder for cattle and other domestic animals (Manandhar, 1980). Forest Act of 1993 and forest regulation 1995 provided a sound legal and institutional footing to the FUGs and empowered DFO to hand over accessible forests to the extent that communities are willing to, and capable of managing them. These factors to a large extent accelerated handing over process of community forest, to the traditional forest users i.e. community forestry is the official recognition of people's customary rights of use and traditional forest management practices (Singh, 1996). The new act has recognized the FUG as an autonomous and self

governing enity. According to the Act, DFO may hand over any part of a national forests to a user group in the form of community forests to develop, conserve, use and manage the forest as prescribed in the operational plan, and according to the forest resources condition and demand, users can sell and distribute the forest product independently by fixing the price. In addition, the FUG can generate funds from different sources and community use the fund for community development activities besides forestry development.

Community forestry was originally conceived to protect forest and to fulfill the basic needs for forest products of the local population. It (CF) was closely linked to the afforestation program, and both programs were to be implemented in the hills to meet the urgent need of people for forest products like timber, firewood and fodder for cattle and other domestic animals (Manandhar, 1980).

Government of Nepal is strongly committed to a policy of community forestry where MPFs, 1988 has been prioritized to community and private forestry investing 46% of the total budget. Since 1995 the community forestry program has been spreading wildly. FUGs have been established rapidly, and at present there are more than 9000 FUGs. The areas managed by them is approaching 0.7 million hectares. Besides forestry, FUGs are involved in there community development work like income and employment generations.

CF Management Trend

Community forests have been managed for protection and basic needs and not for surplus production. Community forestry policy and operational plans have emphasized protection over active management (Yadav and Branney 1998, Maharjan 1998, Dhital et al. 1998). Therefore,

many community forests are like "cows producing more milk than what is being milked" a stage which is neither beneficial nor healthy, neither for the forests nor for the users or for the government. In fact protection oriented management has many negative effects like additional labour burden, underutilization of forests, lowering the productivity of the forests.

Poverty alleviation is the main objectives of the current tenth plan (2059-2064) and community forests have the potential to meet subsistence needs and to provide income (Forest Act 1993 & Regulation 1995). Thus the community forestry program can help in achieving the objective of poverty alleviation. After years of protection, most of the community forests have increased their growing stocks and have increased their potential yields that pervious protection oriented operational plan period. FUGs are using the community forest to meet their minimum needs while removing shrubs and dead & dieing trees, and cutting branches. In this way, they are just meeting subsistence needs and not utilizing the full potentials of forest productivity.

Considering the above mentioned issues, GN issued a circular on Feb. 2000 starting that for scientific management of CFs, green trees could be harvested after growing stock inventory and calculating the annual increment in operation plan. This circular has been positively operated for the sustainable management of community forestry. According to the Forest Act and circular Feb. 2000, forest users are in the way of incorporating amended 1996 operational guidelines, in operational plan to manage their forests by multiple forest management system. Multiple forest management system includes managing forest for different products and purposes, which can be received from the forests like NTFP, wildlife recreation, education and bio-diversity conservation.

2.2 Bio-diversity Conservation

The word bio-diversity was coined by water G Rosen in 1985 (Quoted in Sharma, 1997) to denote biological diversity, which encompasses the total variability of life on the earth. The bio-diversity is being now considered at three levels viz. ecosystem diversity, species diversity and genetic diversity.

Nepal is endowed with more than 7,000 species of higher plants, out of which more than 700 species are reported to be of medicinal importance, about 100 species for fodder, 70 for fiber and 450 spp. for food have been utilized by the rural population (Manandhar, 1995). Nepal is rich in respect of both floral and faunal diversity despite of its small area. Nepal's forests provide a spectrum of products and services and it has also unique geographical position in the world. Dobremez classified Nepal into four phytogeograhic unit also identified more than 114 ecosystems and seven major bio-climates (Dobremez, 1972, BPP, 1995).

Nepal has become a common platform for meeting the floristic elements from all these surrounding regions (BPP, 1995, Shakya, 1995). Paleartic and indo-Himalayan realms and three bio-geographical provinces meet Nepal. out of eight biological realm of the world. Bio-diversity of Neoa; is not distributed uniformly throughout the country. The mid-hill region with an altitudinal range of 1000 to 3000m. has greatest biological diversity in must respect. Regarding the endemic plants of Nepal, 370 flowering plant species are endemic to Nepal (Joshi, 1991). Nepal has bears almost 635 species of butterflies, 185 species of fishes, 143 species of herpetofauna, 844 species of avifauna and 181 species of mammals, out of these some are endangered, threatened or endemic in Nepal.

Nepal has only 0.1 of the world. About 2 percent of the flowering plants, 3 percent of Pteriodophes, and 6% of the Bryophytes of the world's flora have been recorded so far. About 246 species of plants are endemic and the mountain protected areas are comparatively rich in endemic flora of the total species recorded, 13 plants are included in the cities appendices and 13 species are legally protected. Mammals of Nepal share about 3.8% the world threatened species and 2.26% of birds. His Majesty Government has given legal protection status to 26 spp. mammals, 9 species of the birds and 3 species of reptiles. These species are well conserved in protected areas. Biological species outside the protected areas are under the great pressure due to habitat loss and/or degradation, unregulated collection of the forest products and illegal poaching and hunting of animals. GN has recently prepared a National Bio-diversity action plan to proceed for species management. Our forest protection system must self help, intensive, self motivating and widely desirable or acceptable to conserve this must forest and thus bio diversity.

2.3 Community Development Perspective

Community development implies orderly movement of an organism or a social system from a lower level of functioning to a higher level of functioning and integration. It involves increased utilization of resources, better participation of the members of the community and inculcating a spirit of co-operation among members for improving their standard of living through working for better amenities and facilities (Ahuja, 1993).

The concept of community development was elaborated as early as in 1940's by the British colonial government as a process to mobilize the labour of rural and urban communities in support of national government objectives it build social physical infrastructures and increase self

reliance. It was first applied in Ghana and during the fifties it was extensively integrated into India's national development plans. According to the United Nations, the strategy of community development assumes that the activities and efforts of the population have to be combined with governmental development projects and programs in order to improve the economic, social and cultural living conditions of the people.

Community development was stated in Nepal since 1950s i.e. first 5th year plan. According to the planning commission, community development can be defined as an attempt to bring about a social economic transformation of village life through the efforts of the people them selves.

Now, community centered participatory approach came into existence for community development. In fact, participation strengths the capacities of individuals and communities to mobilized and help themselves (Midgley,1986:8).

The development theorists believed that poor could be mobilized to participate in development effort through consciousness and awareness building. The general idea behind the approach was to develop programs for mobilizing village populations so as to achieve fully utilization of local human and natural resources.

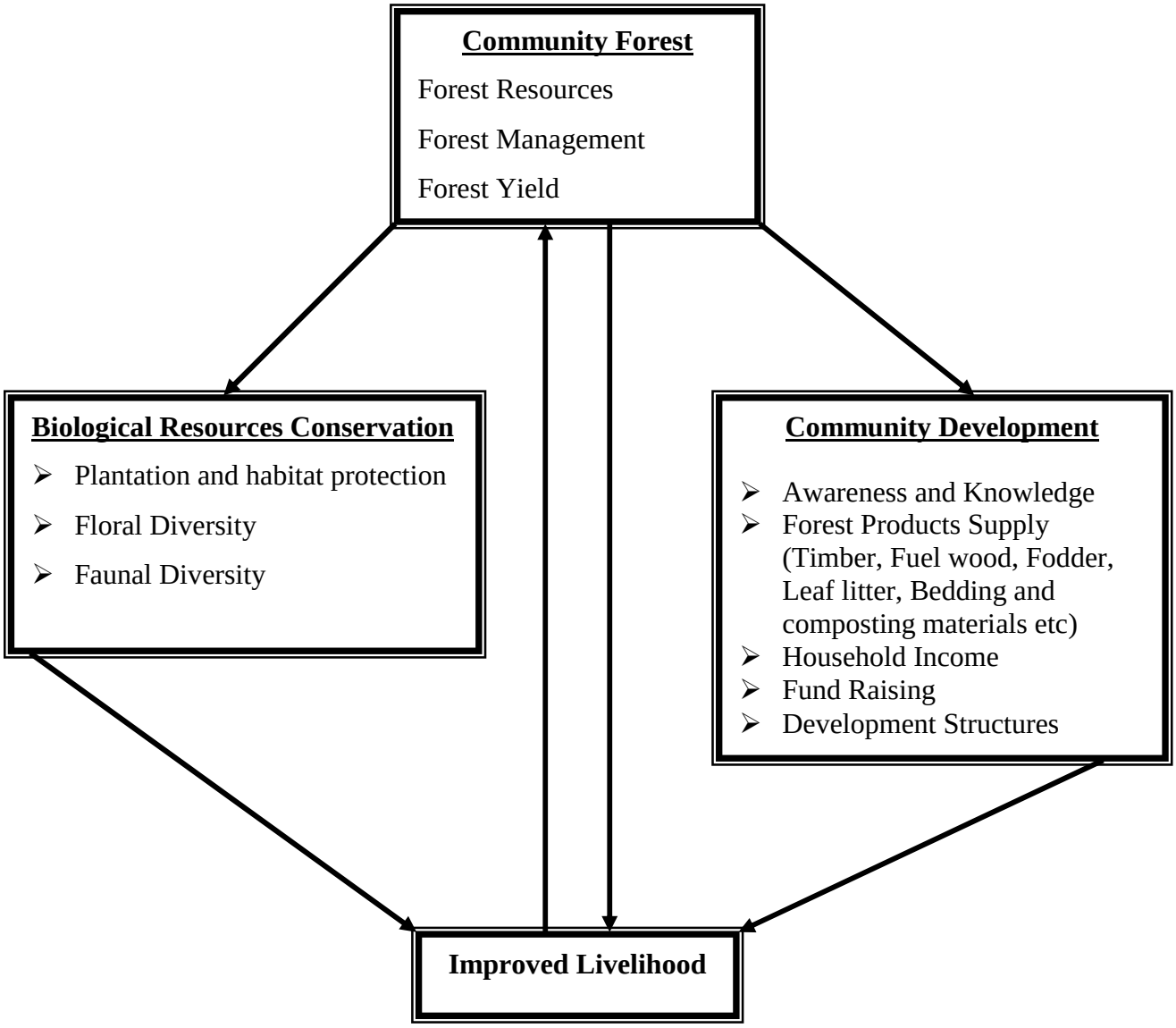
Community development programs are operated in our country where agriculture sector is given main priority to conduct the programs. Since approval of Forest Act 1993 and regulation 1995, there is legal provisions that t least 25% of the income generated by operating the forest plan should be spent in forest development and remaining 75% income should be used in community development works to develop the society. Considering this provision, forest user groups in the country are using

their 75% income of the forests in socio-economic i.e. community development works like road construction, drinking water supply, help to poor students, temple and chautaro constructions. etc.

The studies FUGs have also been following the above provisions and conducted some community development works to develop their society and managing the forest to maintain Bio-diversity in the area.

2.4 Conceptual Framework

Conceptual Framework of the Study



(Chart 1)

The main terrestrial biological resources are forest where plant species play a major role in the totality of biological resources forest. Forest is indispensable part of agriculture, livestock and other dimensions of rural people in Nepal. People have suffered from the scarcity of different forest products e.g. leaf litter, for manure, fuel wood for energy, timber for housing, fodder for their livestock and other forest products that need in various aspects rural and urban life. To manage the forest resources in the country community forest is a best possible strategy that involves local people in participatory management.

Community forest are protected, planted and developed by the local people to maintain the forest diversity. Similarly livestock have food materials from community forest and agriculture land through people and instead livestock provide monetary incomes and strength to sustain rural life Wyatt-Smith (1982) has suggested that 2.8 hectares of accessible forests are required for sustaining each hectors of farmland. In this way, each and every components of the terrestrial system are interrelated to each other for their impacts fall on Bio-diversity conversation in one aspects and on community development in other aspects. Regarding the bio-diversity conversation, people plant the open area of CF and protect and manage it in sustainable way. From these activities, habitats of several wildlife have been conserved and increase in floral as well as faunal diversity in CF area. Community forest program have also provided various training, workshops, study tours about forest protection, management and community development people also get various forest products and some income by selling surplus products as well as by operating IGA in the community fund and by this fund several community developments works can be done in society.

Various basic needs of the community can only be saturated by versatile use of diversified forests, products. So, the forest diversity should be maximum to fulfill the diversified needs of the people the larger the forest diversity indicated the large the capacity to fulfill the wider needs of rural and urban people as well. Hence, wider forest diversity is anticipated for better livelihood of people in any area.

An enumeration of the species occurring within a particular sample area is one often used to measure species diversity. To assess the community development socioeconomic status is used a parameters. In his hell, community forest is directly linked with rural people livelihood by maintaining bio-diversity conservation helping in community development to uplift the social status.

2.5 Definition of Variables and Key Terms

Community Forest (CF)

A community forest is a part of national forest handed over to forest user group for its development, protection and utilization for collective benefit.

Forest User Group (FUG)

Forest user group refers to the functional group of users of CF which are registered with their constitution in District Forest Office, is allowed to manage the forest and to use and distribute the forest products independently according to the approved operational pian.

Forest User Committee (FUC)

FUC is an executive committee, whose members are selected by FUG on the basis of consensus or voting that are listed in the constitution of Forest User Group.

Operational Plan (OP)

Operational plan is a written document related to the protection management and utilization of forest on a sustainable basis prepared by FUG with the assistance of District Forest Office (DFO) staff, which must be approved by District Forest Office under the Act 1993.

Constitution

Constitution refers in this study is constitution of FUG which prepared with the help of DFO staff.

Interest Group

Interest Group is group of people with similar sales of interest or common problems. These include different in sex, caste, wealth and religious belief.

People's Participation

People's participation refers to the active participation of all forest users in all phases of community forestry planning that means from user identification to the benefit sharing as well as monitoring and evaluation.

Untouchable Caste

Untouchable castes are those castes, which are not allowed to touch other caste upper than them in caste hierarchy according to Hindu ideology.

Forest Management

Forest management means take care of forests applying different scientific operation like thinning, pruning, weeding and cleaning.

Thinning

Thinning may be defined as 'a feeling made in an immature stand for the purpose of improving the growth and form of the trees that remain, without permanently breaking the canopy'.

Pruning

Removal of live or dead branches or multiple leaders from standing trees for the improvement of the tree or its timber is known as pruning.

CHAPTER-THREE

RESEARCH METHODOLOGY

3.1 Selection of the Study Area

The research will conduct in Salleri FUG Area Amarpur VDC in Panchthar district. The area is selected due to the following reasons.

- Researcher familiarity in the area
- Community forestry program has been implemented in the area.
- Easy accessibility to the area.
- No researchers of this kind have been done so far in those areas.

One FUG of Amarpur, for in depth study while selecting FUGs social, economic, technical and institutional dimension of the community forest was given the due considerations in order to make the study more practical, technically sound and reliable with the present situation of community forest.

3.2 Research Design

Descriptive research design was in this study, it makes an attempt to describe and collect the necessary data to document the impact community forestry on biodiversity conservation and community development of respected field. It is hoped that this research design may fulfill the specific objective of the study.

3.3 The Universe of the Study

There are 7 community forest user groups in Amarpur VDC. Among them Salleri community forest user group will be select as study unit purposively. That community forest user groups consists of 240 households and it benefits about 1600 users. Out of 240 households, 10% households will be selected as the sample unit from the list of user group, by lottery system.

3.4 Nature and Source of Data

The research is field based study. The primary data like socio-economic information's people's participation in forest management, attitude towards bio-diversity conservation, existing conservation procedure, etc. will be collected through field work. The available relevant written documents e.g. village profile, FUG constitution and operational plan of forest, forest user group and forest user committee meeting minutes and documents, publication and reports to district forest office, forest users group, DDC profiled were the sources of secondary data.

3.5 Data Collection Tools and Techniques

The following techniques and tools were used for collection of primary data.

3.5.1 Interview Schedule

Reconnaissance survey of the field (surey) was done at first and the survey techniques followed the participatory methods. Information were collected following the GAS-PRA (Gender Assessment Study-Participatory Rural Appraisal) as well as household survey techniques. For assessing socio-economic status of users, their participation towards

forest management, attitude towards bio-diversity, existing conservation procedure and possible alternatives. Various data were collected by asking some questions with sampled households in the study area.

3.5.2 Key Informants Interview

Staffs of District Forest Office, Forest User Group Committee Members, Village Development Committee Members and other educated users are the key informants for the study. Formal and informal discussions were performed with them. The discussion was held on their contribution, history of community forests and status of participation of women, lower caste and other general users. They were also asked about bio-diversity status of the community forests. Checklist was prepared to discuss with them. Based on the discussion, the relevant information was recorded in plain sheet.

Besides that, two users, one male and one female were also taken as key informants. They are the devoted users in protecting the forest since community forests was launched. In depth informal discussion was curried out with their experiences, feeling and contribution. Maximum focus was given to collect qualitative rather than quantitative data form the key informants.

3.5.3 Observation

Direct observation was applied to get relevant information for the study. In the courser of fieldwork, present condition of forest, applied forest management operation (thinning, pruning, fire and construction) was observed. The researcher attended one of the user committee meetings as an observer. Participation of women and their activeness in the meeting, FUG recording and accounting systems was also observed. Firewood

storage, fire wood consumption, feeding materials of domestic animals, agricultural practices, community development activities done by FUG were also observed. Observation was made during rapport building and informal discussion with users. The observation helped very much in understanding the field reality, which was fruitful for the study that could not been captured through verbal discussion.

3.5.4 Formal and informal Group Discussion

During field stay, the researcher met local users, women users, and lower caste users. Formal and informal discussions were done with them. Discussion with women users and lower caste user were taken separately. qualitative data were collected through discussions. The discussion foucsed on the matter of the users participation in different community forestry activities. Their view about community forestry management, community development activities initiated by FUG and current and past status of bio-diversity in Salleri CFs was also discussed.

3.5.5 Resource Inventory Design

Vegetation Assessment

Preliminary survey of whole forest was carried out. Then stratified systematic random sampling was done in permanents rectangular/square plots by taking references and bearing in fixed intervals. Sampling intensity was 1% of total forest. Sample size was 100 square m. for main plots and 4x5 m2 for regeneration plots. Poles from 10-29.9cm. Dbh was mesured from main plots (10 and seedling less than 4cm Dbh and above 30cm. 1 feet) in ht were contend as regeneration. The condition was assessed by direct observations.

3.5.6 Secondary Data Collection

The secondary information was collected from related DDC, VDC, DFO, T.U. Library. Range post, others papers and publications mainly for general type of information like climate, total population, topography gender role and socio-economic status of the peoples.

Resources inventory was carried out following the "Guidelines for inventory of community forests" 2000, published by MFSC, Nepal.

Following parameters were used to list out the community development activities initiated by FUG in study site:

- Infrastructure development activities, trails, drinking water supply school education etc.
- Economic development activities, fund raising monetary assistance to society members like students for reading, manage etc.
- Skill development activates; able to use various tool in CFF management, carpentry, brick works etc.

3.6 Data Analysis and Presentation

Data were analyzed both qualitatively and quantitatively. Data will obtain by using PRA tools will be analyzed qualitatively in descriptive methods whereas data obtain from resources inventory were analyzed quantitatively. The quantitative data were analyzed by mean, percent to assess the people's participation and attitudes towards the bio-diversity conservation. Other necessary analytical exercise were carried to come up with appropriate recommendation like either positive impact after gender

consideration in FUGs or negative impact. Relevant maps, table and chart are also presented wherever they are useful.

3.7 Limitation of the Study

Every study has its own limitations and this study is not an exception. The following are the main limitations of the study.

- This study covers only Amarpur VDC; therefore, generalization may not be valid for all mid-hills regions of Nepal.
- Due to the lack of baseline information on bio-diversity for the past or the time before the forests were handed over to users, the changes in bio-diversity in the forest will not be assessed through interviews with local people only.
- All facts of bio-diversity will not be covered by this study. It is widely understood by people and is considered to be the measurable parameter of bio-diversity.
- Species identification and nomenclature work was not completed due to technological expert.
- Not based on any theoretical frame.
- Applied research designs are merely exploratory and descriptive.

3.8 Ethical Consideration

In this study, some ethical norms and values were used, which guided for, less biasness during study period such as,

- Respondent's personal/private relation and confidential matters, which affects in his/her life were not mentioned in this study.

- Respondents or key informants were explained the purpose and objectives of the study clearly and in understandable way. This study did not considered to add any of researcher's own expectation and false information.

- No unnecessary pressure was made to the user refusing to involve in the discussion but more efforts were made to motivate such user to involve in the discussion.

- Data/information were not exploited or manipulated during study period data and information were interpreted on the basis of gathered information and findings.

- It was very easy to collect information (Socio-economic and resources information) from villagers by being better familiarity and good rapport build up with them.

CHAPTER-FOUR

THE STUDY AREA AND PEOPLE

4.1 General Characteristics of Amarpur VDC

4.1.1 Geographical Feature

Amarpur is one of the large VDC of Panchthar District our of 41 VDCs. This village lies in about 40 km. East of Phidim district headquarter of Panchthar and 800-1000 meters attitude from sea level. There is motor able road from Jhapa.

There are may kinds of new goddess status and temples, which are more, then 20 years old. But famous temple and Buddhist Gumba and Shiva Temple of the goddess of this area.

Location and Boundaries

Amarpur is situated in side of hills boundaries. Tamor River lies in the western part, Panchami VDC lies in Southern part, Thrpu VDC lies in Eastern part and Kabeli River lies in Northen part of this VDC.

4.1.2 Demographic Feature

According to VDC profile 2001-2002 total household was listed 1375 total population 7743 of which males were 3743 and females were 4000 based on the VDC profile the total population. Hindus are dominant in the VDC covered 60% whereas Buddhist covered 35% and Kirat covered 2% and other are 3%. The main language of the VDC is Nepali, national language through the other mother tongues Tamang, Limbu, Rai and also dialect language in their own society. The dress, food habit and culture of

this VDC is similar to their Hindu and Buddhist religious of this Nepalese society.

4.1.3 Language, Caste and Religion

The caste/ethnic composition of this VDC comprises Rai, Bramin, Chhetri, Tamang, Damai, Kami, Sarki, Gurung, Magar, Sanyashi, Newar and Limbu as major castes if the VDC. Due to multi caste/ethnic composition, different languages are used depending on their groups. They respect and celebrate both festivals of Hindi and Buddhist religion VDC profile 2002.

4.1.4 Natural Resources

In general land forest and water are the important natural resource of the village Brief account of these resources is as follows:

4.1.4.1 Land

Land is one of the most exploited and utilized natural.

4.1.4.2 Forest

Another major natural resource of the area is forest. Ten years before, there was very low growing stock of forest. Lack of effective protection of forest by government during that time was one of the major causes for inappropriate use of forest resources. Since 1989, District Forest office has extended its community forestry program in the study area. Since then forest condition has been improving. It is estimated that two third of the fuel requirements of the users and fodder, leaf litter, grass to the domestic animals are fulfilled from own village forest.

out of total forest area of the district, 14434 hectare area is potential community forest area. Among this, about 10,000 hectares of forest area is managing by 135 community forest user groups.

Details of the community forest of the VDC are illustrated in table below.

Table No. 1

Distribution of Community and Religious Forest in Amarpur VDC

S.N	Name of the Forest	Ward No.	Area (H.)	Hand over Date	Household
1.	Salleri CFUG	2,3,4,5,6	189.25	2052/03/27	240 HHs
2.	Phedapa Salleri CFUG	1,3	486	2052/03/30	102 HHs
3.	Bijuli Bhanjyang CFUG	6	46.72	2053/01/07	154 HHs
4.	Singhadevi Pathivara CFUG	6,7	69.75	2054/09/15	76 HHs
5.	Madibung Salleri Mahila CFUG	9	146	2058/02/17	196 HHs
6.	Kabeli Garjeete CFUG	1,2,4	36	2058/12/24	173 HHs
7.	Chiurpari	7,8,9	174	2060/03/24	318 HHs
	Total	-	1147.72	-	1259 HHs

Source: District Forest Office 2001-2002.

Above table shows that community forest program benefits 1237 households of Amarpur VDC.

Different types of the tree species and wild animals are found in the forest within the VDC. Major forest Sal (Shorea Robusta). Salla (Pinus roxbrughii), Chilaune (Schima wallichii), Utis (Alnus nepalensis), etc. are main tree species found in the VDC. Similarly, Monkeys, Jackle, Leopard, Rabbits and different types of bird are found in the forest. The focal point of the study is Salleri CFUG located in ward no. 2,3,4,5,6 of the VDC. There are 240 householods protecting and managing the Sallari CFUG where 1200 peoples are benefited from the forests. Out of total population of forest user groups 590 are males and 610 are females populations beneficiaries.

4.1.4.3 Water

The main sources of water are reverse and ponds in the study area. It has much small size of ponds and rivers like Nindakhola, Sisnekhola and other etc. There is a small tank of drinking water supply to fulfill the villagers water supply for their livelihood. There are 108 public water taps, 19 water wells and deep water well supply of water needs.

4.1.5 Infrastructure Development

Amarpur VDC is linked with Mechi Highway road district headquarter. Frequent bus service available making easy access to the people for marketing and to join for primary education. Two primary schools are providing education to people. One health post is providing health services to the villages, agriculture and livestock service center, are also providing services to the peoples.

Similarly, club of Amarpur providing various social and educational services to the local people.

CHAPTER-FIVE

SOCIO-ECONOMIC FEATURES OF THE SALLARI COMMUNITY FOREST USER GROUP

5.1 Location

Salleri forest user group is one of the seven forest user group of Amarpur VDC. People of ward no. 2,3,4,5,6 the user of Salleri community forest. The community forest is located is the southern part of VDC, which has the total area of 189.25 hectares. Slope of the forest is about 26.460 to 48.80 facing towards north-east. Forest is dominated by almost natural regeneration. Major tree species are Sal (Shorea Rubusta), Salla (Pinus roxburghii), Chilaune (Schimawallichi, psinyu (prunus cerasoides). Monkey, Leopard, Rabbits, fox are major wild animals in addition to different species of birds like Kalij, Pick Cock Dove is also found in the forest (Source: FUG Record, 2002).

5.2 History of the Hatikharka Community Forest

The forest is situated in ward no 2,3,4,5,6 of Amarpur VDC, Ilam. Before 2011 the condition of the forest was good and naturally rich flora and fauna. After 2011, forests degradation started due to illegal felling, uncontrolled urbanization, soil erosion, illegal export of timber to outside the VDC area and forest area converted into bare land up to 2026 B.S.

On 2026 B.S. that bare-land namely Amarpur was covered by pinus plantation on finding and supervision of Nepal government. After plantation, one watcher was appointed by NG to see and protect the plantation area. Forests were protected and had been improving up to the time. When watchers were discontinued after 2039 B.S. protection aspect

of the forest become failure and again started degradation as before 2026 B.S.

On 2046/47 physical years, those degraded area was again planted by finding assistance pf community forestry development project. At that time pinus and Utis species were planted and protection stared with the help of local rural people. Because of involvement of some local people in plantation of that forest patch and extension of awareness program peoples started to participated in forest protection and development. As a result of local participation, self realization by local people, Salleri forest user groups was registered in DFO and started to protect the forests as Salleri community forests. The condition of the forest has been improving and now, forest patch have become mixed forest of schima castanopasis.

FUG have prepared a new operation plan of period of 2056/57-2058/059 to protect manage and utilize the forest on sustainable way. Out of FUG, one person has been appointed as a forest watcher, by the prevision of payment to him in kind as well as in cost. In Amarpur VDC, seven forest patches handed over as community forest and Salleri CF is one of them. Nowadays, schema wallichii, pinus, utis, sal are present in the forest. Now the condition of the forest is better than previous days.

5.2.1 Forest Composition

Vegetation the forest has been obtained by participatory and technical vegetation assessment of the community forest mainly Sallo forest is dominated. Forest inventory based on NG guideline for CF inventory, following result of records have been obtained.

During forest inventory, the criteria used to define a trees, poles regeneration (seeding, samplings) are as follows:

For tree strata: plot size = 25m x 20m

For pole strata: plot size = 10m x 10m

For regeneration: plot size = 5m x 5m

For trees: DBH be > 30cm

For poles: DBH be 10.0-29.9m

For regeneration DBH be 4-9.9cm for regeneration: DBH be 4-0.9cm as saplings DBH below 4cm as regeneration.

Major findings of trees, saplings and poles species in community forests are shown in about table: those species which has DBH greater than 30cm are considered as trees whereas those which has DBH between 10cm to 29.9cm are considered as poles and below 10cm i.e. are regarded as regeneration (seedling and saplings).

5.2.2 Sampling Adequacy and Bio-diversity Indicator Analysis

While estimating species diversity it is necessary to sample the area such that gives a good representation of the species richness and diversity of that region. This can be achieved by sampling a larger area either by increasing the number or area of the plots or by increasing both simultaneously. However, in practice one can use species area curve to analyze the species richness and finalize. The sample plot number or area. The smooth curve indicate the adequate number of sampling for species diversity in that particular area. But in my present study the plot number is fixed and checked by diversity status. The species area graph and cumulative number of species are resented below.

Chart-1

Sampling Adequacy and Plant Diversity Indicator Analysis for Regeneration (Seeding/Saplings)

Chart-2

Sampling Adequacy and Plant Diversity Indicator Analysis for Tree or Poles

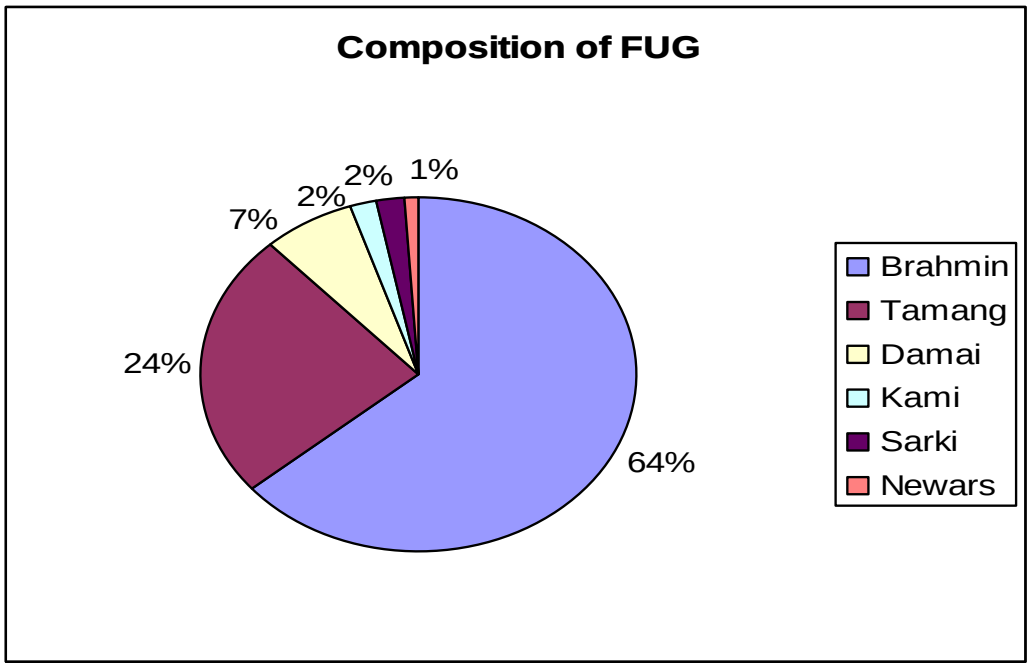
5.3 Social Characteristics of Forest User Group

Social and cultural features and economic activities of forest users were examined to discuss the social characteristics of forest user group using twenty-four sampled households. Among 42 household 34 households were taken from Brahmin caste, five households from tamang and one HHs. From each damai, sarki, newar. Out of 42 sampled HHs eight respondents were females.

5.3.1 Ethnic composition of Forest User Group

Salleri community forest has 240 households. There are 4919 users among these household. Which are legally defined as primary users. All members of the FUG have feeling of ownership about their shows detail information of caste/ethnic composition of Salleri forest user group.

Chart-3



Above table describe that are 64% households of Brahmin, 24% household of Tamang 7% , Damai 2%, Kami 2%, Sarki 1%, household of Limbu by caste hierarchy, Brahmin are the dominant caste and then hierarchy by Tamang and lower castes Kami and Sarki in Salleri forest user group.

5.3.2 Age and Sex Composition

There are altogether 240 household in the Salleri forest user group out of these 42 households were selected as sample for the study. Forty-two households covered benefited users. These sampled household users are categorized in five age groups in the following table:

Table No. 2

Age and Sex Composition of Sampled Household

S.N.	Age group	Male		Female		Grand Total	
		No.	%	No.	%	No.	%
1.	0-5	20	18.51	8	8.69	28	14
2.	6-14	8	7.40	10	10.86	18	9
3.	15-39	42	38.88	40	43.47	82	41
4.	40-59	20	18.51	20	21.73	40	20
5.	Above 59	18	16.66	14	15.21	32	16
Total		108	99.96	92	99.96	200	100

Source: Field Survey, 2007.

From the above table, it can be seen that the pop of female is lower than male. Age group between 15 to 39 has domination in the user group, which has covered of total users. Out of total respondents, 32 were above 59 years old and 40 were in the range of 40-59 years 28 respondents were in between 15-39 years age class and 18 was in the range of 6-14 years.

5.3.3 Household Size and Structure

Household size of the Salleri community forest user group from found from 1 to 9 members with average members of 5.62 persons. Most of the

families were found nuclear family. Distribution of families of respondents household is presented in the table no 3 below.

Table No. 3

Number and Percentage Distribution of Family Size of the Sampled Household

S.N.	Number of Family Members	No. of Households	Percentage
1.	0-4	7	16.66
2.	5-6	26	61.90
3.	7-8	7	16.66
4.	9 and above	2	4.76
Total		42	99.98

Source: Field Survey, 2007.

Above table indicates that most of the household were found having 5 to 6 members family size which is 61.90% in coverage of the user group, 3 households were found having 3 to 4 members with 16.67% in coverage of total households. Only two households were found with 7 to 8 members in family. During the household survey, only one Damai family household was found with more than 8 members which has family size of 9 members. Ethnically, it was found that Brahmin has average of 3 persons per-household whereas Tamang and Damai were found 5 and 6 persons per-household respectively.

5.3.4 Educational Status of Respondents

The data reveals that Brahmin are highly educated than others. Education level of male is higher than female. Both young and old generations of males are educated. Most of the females are uneducated over the age of 45 years. However, the young generation of Damai, Kami, Sarki are also educated. Old generation of woman of these groups are illiterate. Educational status of the sampled users is categorized in six levels, which is given in the table no. 4 below.

Table No. 4

Distribution of Population by Educational Status

S.N.	Educational Status	Male		Female		Grand total	
		No.	%	No.	%	No.	%
1.	Illiterate	25	23.15	40	43.48	65	32.5
2.	Primary class (1-5)	15	13.89	15	16.31	30	15
3.	Secondary class (6-10)	35	32.41	20	21.74	55	27.5
4.	SLC	20	18.52	10	10.87	30	15
5.	Intermediate and above	10	9.26	5	5.44	15	7.5
6.	Literate but no school trained	3	2.78	2	2.17	5	2.5
Total		108	100.00	92	100.00	200	100

Source: Field Survey, 2007.

The above table shows that 32.5% of users are illiterate and 67.5% of users are literate. Illiterate percentage of females is higher in comparison to male users. The 43.48% of females are illiterate whereas males are 23.15 illiterate. The 7.5% of males are having intermediate and above levels of education whereas total 5.44% of females are having intermediate and above intermediate level of education.

During households survey, only one male Tamang among 28 tamang users was observed with higher education. In Kami, Damai users no single user was obsrved with education where as, 5 respondents were secondary level and 5 were intermediate and above level.

5.4 Economic Activities

land tenure, livestock holding capacity, agriculture production and food sufficiency and occupation of the forest user group were surveyed and examined. The details of these activities are briefly discussed in the following sections.

5.4.1 Land Tenure Ship

Among 6 ethnic groups, Brahmin hold more land than others. No Brahmin family was found having less than 1 ropani of land. Distribution of sampled household by the size of land holding is given in the table no. 5 below.

Table No. 5

Distribution of Sampled Household by the Size of Land Holding

S.N.	Land holding (ropani)	No. of households	Percentage
1.	Landless	1	2.38
2.	0-1	15	35.71
3.	2-5	22	52.38
4.	6-10	4	9.52
Total		42	100

Source: Field Survey, 2007.

Above table indicates that there are 15 households with 0-1 ropani land holding. They are from Tamang, Limbu, Sukumbasi, Brahmin, Chhetri are land holding more than 4 ropanies.

5.4.2 Livestock Holding

Damai, Kami, Sarki have no livestock whereas Brahmin/Chhetri and Limbu have some domestic animals like cow, buffaloes and goats. Few Limbus are involved in poultry farming and bees keeping.

5.4.3 Agricultural Production and Food Sufficiency

Main agricultural products are maize, potato, pea, rice and some green vegetable in the settlement area. Green vegetables are produced as cash crop. However no household was found dependent on agricultural production only. Brahmin and Limbu have extended their service in different government and non-governmental organizations.

Generally, females of household occupied with agricultural work and males were occupied with government and non-government sector service. Only 3% households of Brahmin are completely dependent in agriculture who have sufficient production for their livelihood. Agriculture production make the Tamang ethnic groups helpful to survive only for 6 months but remaining 6 months needed to work for their survival. The table no. 6 below shows the production pattern of agriculture in Salleri user group.

Table No. 6

Distribution of Sampled Households Based on their Agricultural Production

Crops	Unit	Agricultural Production				
		1-3 muri	4-6 muri	7-9 muri	10-12 uri	Above 12
Rice	HHs	4	3	3	5	
Wheat	HHs	12	7	2	3	4
Maize	HHs	15	5	3	3	1

Source: Field Survey, 2006.

Above table shows that 31 households produce rice and maize whereas 2 households without any production of maize 2 nice similarly 12 households do not produce. Out of 42 HHs sell their agricultural production as a surplus production.

5.4.4 Occupation

Livelihood of the user is mainly based on subsistence of the agricultural economy. The only agricultural production is not sufficient for their livelihood. Brahmin and Tamang community extended their occupation in service of government and non governmental organizations. Damai and Sarki are mainly busy in their profession and their survival depended upon that occupational distribution of respondents is given in the table No. 7 below.

Table No. 7

Occupational Distribution of Sampled Household

S.N.	Occupation	Households	Percentage
1.	Only Agriculture	4	9.52
2.	Agriculture and service	22	52.38
3.	Agriculture and small shops	4	9.52
4.	Wage labour	8	19.04
5.	Occupational job	4	9.52
Total		42	99.98

Source: field Survey, 2007.

The table above shows that most of the household (58.33%) are involved in governmental and non-governmental service besides agriculture. Income from extra activities than agriculture is used in the expenditure of education, health, festivals, cloth and food. Household of Damai and

Kami are found soley dependent on daily wage labour and occupational jobs. Carpentry, Masonry in construction and other labour work related to agriculture and stone query are the man source of daily wage labour work related to agriculture and stone query are the man source of daily wage labour work related to agriculture and stone query are the main source of daily wage labour work for the deprived users of Salleri community forest. Out of 12 respondents, 10% are occupational job holder whereas 75% are involved in agricultural and 10% are engaged in services as well as small shops. Wage labor includes 5% respondents.

5.5 Cultures and Religion

In Salleri forest user groups, ethnically the users are heterogeneous but culturally and religiously they are homogeneous. The all are belongs to Hindu religion. All ethnic groups celebrate Dashin and Tihar and other Hindu festivals. Damai, Kami and Sarki in the community belongs to untouchable caste. Even though constbubonally prohibited, they are not allowed to touch Brahmin, Tamang, Newar. Brahmin community celebrates kul puja once in a year. Damai and Sarki, kami ethnic group has no extra special religious practice and celebration.

5.6 Use of Forest Products

The main forest products are used by the local people on a regular basis are leaf litter, fire want and fodder Timber for construction is in less demand. The forest users fulfill their most of the demand of forest products from community forest and to same extent from their own farmland (from tree agricultural residues & weeds of agricultural land).So far the forest user are not using forest products for the purpose of income generation. As the trees of the community forests are in young age not viable to produce timber as demand of users. If users need large amount

of timber they buy from nearly market. Users use medicinal plants extracting from their community forest if they need for their own use.

5.7 Problems in Managing Community Forest

According to sampled households, users are facing some problems in managing the forest on sustainable basis. These problems are as follows:

5.7.1 Protection Problems

Out of 42 respondents 16 told that, there are little bit problems in protecting the forest as forests is not able to supply the demand of increasing no. of users. Although there is a watcher to look after the 198 hectare forests but become failure to see all the time and some users collect firewood illegally e.g. 7 users are punished due to illegal firewood collection last years. According to opinions of respondents, extension awareness regarding the CFAs should be contracted to watch the forest by all users in stead of only watchers.

5.7.2 Products Distribution Problems

The area of the forest is not able to fulfill the demand of .....has which are defined users of the Salleri CF. They are facing firewood crisis in some seasons and raise some conflict during distribution of the products collected from the community forests those HHs with more member demanded more forest products than HHs with less members. Most of the households were with more members i.e. 18HHs but forest could not meet the demand up to now. To solve these problems, sampled households suggest that, agroforestry system should be emphasized and plantation must be done in the open area of the forests. Similarly forests products should be distributed on equity basis not on equality basis.

5.7.3 Forest Management Application

Users have lack of scientific harvesting tools to do various silvicultural treatment like thinning, pruning, singling, fire line construction, felling etc. in their forest. So they must have proper tools to manage the forest in scientific manner. In view of respondents, FUG hare not sufficient money to buy such tools and organized the training for better using harvesting tools. Therefore, they are demanding training as well as scientific tools to manage their forests from DFO.

5.8 Protection System of Community Forest

The user group committee imposes penalties on members of the user group it they illegally harvest the products for the first time the members are told not to do again. If they harvest again a cash fine is imposed usually the chairman of the committee assisted by other executive members decides the appropriate penalty a Rabindra been appointed by monthly payment of Rs. 900 to take care and supervise the forest from illegal doing. The committee keeps records, which are accessible to all the users the general protection system are mentioned in following table.

Table No. 8

Community Forest Protection System

Description	Protection System
Fire	) No permission to enter the forest taking matches, cigarettes in fire prone period.) Extension by FUG and Range posts, clubs) Penalties for intentional fire
Grazing	) Prohibition to graze) Penalties for harder
Tree species (seeding, shrub, saplings, poles etc.) cutting	) No permission to go to the forest taking knife except on prescribed time.) Penalties for rule breaker
Forest patrolling	) Patrolling is done by CFUG themselves taking equal responsibility and also by appointed Heralus.

Source: Field Survey, 2007.

The protection system was prepared by the user group assembly and the CF operational plan document it very clearly. These systems can be

reviewed and revised by FUG to make betterment for their forest protection, management and efficient use.

5.9 Reward and Penalties

Forest User Group made some penalties rules for those users (either belonging to user group or not) who break the norms and rules of the constitution and operational plan. Rule has not given permission to enter the forest without notice. Users who involve in the destruction of forest are supposed to get penalties. She/he will get penalties in accordance with his/her nature of crime. Salleri forest user group has made two types of penalties i.e. penalties fo rminor offence and penalties for major offence. Details of offence item and penalties are mentioned in two table below:

Table No. 9

Penalties for Minor Offence

S.N.	Offence Items	Penalties
1.	Fodder collection	Rs. 50 per Bhari
2.	Leaf-litter and grass cutting	Rs. 25
3.	Firewood collection	Rs. 25-50 for dry and Rs. 50-100 for green
4.	Timber cutting	Rs. 500-1000 per tree and as per size the timber
5.	Damaging of seedlings	Rs. 100-500 per seedlings
6.	Charcoal Making	Rs. 1000-2000 and seizing the coals.

Source: Field Survey, 2007.

Above table describes that three are penalties in monetary term. There is different rate of fines for separate penalties. Fines rate for illegal charcoal making is higher than other penalties. Above mentioned penalties are minor offences. Next table has described major offence and penalties for those, who found in the forest having intention of forest destruction or already destroyed forest are supposed to get separate penalties on the basis of destruction. The table no. 10 below shows the major offence items and penalties for them.

Table No. 10

Penalties for Major Offences

S.N.	Items	Intension of Destruction	Dead of Destruction
1.	Hunting	Rs. 500 to Rs. 1000.00	File the case to DFO
2.	Digging soil and Extraction	Rs. 15 to Rs. 25 per Bhari	To inform DFO for punishment
3.	Land encroachment		File the case to DFO
4.	Stone Extraction	Rs. 1000 to Rs. 2000 per trip	File the case to DFO
5.	Fire Hazards	Rs. 100 to 500	File the case to DFO
6.	Grazing	Rs. 10 to Rs. 30	Rs. 10 to Rs. 30

Source: Field Survey, 2007.

Above table reveals that there is role of district forest office to give penalties if case is forwarded to Districts Forest Office by Forest User Groups. District Forest Office punish under the Forest Act, 1993.

All forest users are responsible to control the fire hazard if happened. Absence users in the exhaustion of fire are suspended for one year from general membership of users. Wild animals including any wild birds of forest are not allowed for hunting for the protection of wildlife. Persons who is able to catch rule breaker gets reward as 50% of monitory penalties.

5.10 Transparency and Communication

Forest user group/committee has adopted good system for the transparency and communication. Committee has recorded every meeting minutes and financial activity. Any users can check and look it if he/she has any suspect to user committee. Every user can keep any question to the committee to come out from his and her confusion. Details of account and others activities has been presented in the group assembly every year.

User committee and users and informed through letter by committee chair person or secretary for the participation in meeting and assembly. Any absentee user can see meeting minutes after words without restriction to know what decisions were made in meeting. Similarly, for the implementation of every activity, all households are informed to participate through letter.

5.11 Average Forest Condition

The community forests is gradually improving. Seven years of protection has already shown some positive trend on density of trees, shrubs, bushes and the ground cover. The users see this changes in vegetation cover very

positively and they cite the reasons for such changes as (a) zero-grazing in the forest area and (b0 monitoring and convincing users not to cut trees for fuel-wood. People have planted sapling but most of the growth is associated with natural regeneration.

The lower trees and strut densities and species richness indicated still a degraded stage of the community forest. However, the positive efffects of protection such as close to zero grazing and regulated harvesting of ground forage during the last two seasons are quite visible, especially in tree and shrub seedling counts and tree sapling count. considering these perameters for forest growth, it could be said that vegetation and species diversity are "about normal" for this ecological zones, Nevertheless, it would require more stricter conservation practices for another 8-10 years to go better results from the seedling and saplings.

5.12 Off-Farm Activities

Farming is the major economic activity, which is supported by seasonal wage earnings. Out of 42HHs, with limited land holding, work as agricultural labor with the settlement and in Patan. After the paddy/maize harvest, they people go to Kathmandu send money at homes and buy agriculture inputs like fertilizers and some seeds and sometimes for household use.

5.13 Energy for Cooking

Firewood is the major source of energy for cooking. Besides firewood, maize stoves are also used for cooking. Maize Stover supplements fuel woods between October and mid January while fuel wood is used throughout the year. A few of the formers who have a good earning have started using kerosene to cook a part of their meal i.e. vegetables and tea

from mid April to September. Some users use gar stove to cook their food. Following tables show the sources of energy use by sampled households.

Table No. 11

Energy used by Respondent

Fuel-wood	Gas-stove	Other
2HHs	10HHs	7HHs

Source: Field Survey, 2007.

Above tables reveals that 49% of the households were dependent upon fuel wood for cooking food and other things. Out of them, 10% have their own private forest for firewood and 40% fully depending upon CFs to meet their demand. In sampled HHs, 10 were using gas stove and 2 were using other things rather than firewood and gas stoves.

5.14 Institutional Arrangement

User Committee

Community forests were established with a mission to involve the individuals, the immediate users, in protection, development, management and sustainable use of the forest, and to make them fully responsible for their action. It is made them feel that the forests they have been using for decades belong to them and it is up to them to "how best they use and manage the forest the people." User groups and user committees have been formed to properly use and manage their forests. Sustainable use and management of these forests would, however, depend upon the governance activities of the user group and the users committees. In sampled respondents, 5 are working in a forest user

committee to do leading roles in community forestry activities and making decisions.

Duties and Responsibilities for forest User Committee

Forest User Group Committee plays a vital role in protecting and managing the forest with the help of people. They have to follow constitution of user group and operational plan of forest. If user committee needs to change and to add new rules, they have to call general assembly to formulate and approve the roles. They can formulate new rules with the agreement of the general users but it is necessary to take approval from District Forest Office.

Forest user committee has set some duties and responsibilities for the effective implementation of community forestry activities with full participation as much as. The duties and responsibilities of the forest user committee are as follows:

- To call the committee meeting in every month for the discussion on forest management and other causal problems.
- To take the necessary to implement the operational plan.
- To punish and fine the individual, whom is against the rules and regulation of operational plan and constitution. As per need, they get help from district forest office for further punishment.
- To consult with District Forest Office to take necessary technical advice and other helps if needed.
- To keep the records of income and the expenditure of the committee and to present in general assembly in every year for the approval from group.

- To dismiss the position holder user committee members if they do wrong with forest and forest user group.
- To use and distribute the forest products equally as mentioned in OP for the satisfaction of users.
- To check whether user are performing their duty of forest protection.
- To notify the users about the work and decisions of forest user committee.
- To perform other concern work of community forest with the help of general users.

A community forest management work plan for 5 years was developed with user's participation and the forests were handsover to the community as community forests. The user committee is an induced institution at the local level with defined duties, authority and responsibilities as above to implement the policies and action plan.

Activities

During the few years, the committees have co-ordinate planting of plants in open area of the forests and have sanctioned rule breakers. The user committees, with the full support of the user group's general meeting, have dates. The decision in the general meeting determined timing of the harvest of the forest products and their quantity.

In principle everyone of the user committee is supposed to know the rules that guide the committee and its fucntioning, but in practice it is not happening, many of them do not know. Most of the time they follow the chairman of the committee for all decision. On the other hand, the

decisions made of harvesting forest products and planting seedlings last years, known to almost all users.

Governance

Salleri Forest User Committee has 13 executive members where 10 are males and 3 are females members these members has been elected for one years by user during the preparation of inventoried operational plan general assembly. All the executive members belong to the user group.

According to the work plan, and the rules governing the user committee, a meeting has to be held once a month, the Saturday in a month. The user committee has to call all general meeting of user at least once a year to discuss and decide upon forest maintenance, development, use and management.

in principle, the user group's general meeting has the authority to remove the members or dissolve the executive committee of the association and form all new executives from the user if it is proven that the committee is not functioning properly or not talking the assigned responsibilities. This association is more decentralized in the sense that the higher level authority (DFO) can not either remove the members of the executive committee or dissolve the committee till 2063/064 B.S., the work plan period.

The committee members are not paid but work on voluntary basis. The education level of most of the executive member is not so high and many of them have to go through the work plan which they need to implement by 2063/064 B.S. but extension efforts have been made to make them fully understands the mandates and the work plan. Most of the executives

provably need motivation to change their attitudes and attend all formal meeting more regularly as mandated.

Financial Resources

The major financial resources for the forest association are voluntary contribution of fund from the members of the user group and special levies. They collect Rs. 20 per group member each year for membership renewal and Rs. 5 per member during fire wood collection. (Source: FUG Records 2002)

5.15 Effectiveness of Community Forest User Group

The executive function of community forest user group was formally 1993 after formation of user group committee and operational plan of community forest watcher individually and play the equal and important role to conserve protect and manager their community forest. After analyzing the questionnaire, following results obtained for assessing the effectiveness of CFUG.

Table No. 12

Description of the Effectiveness of CFUG

Description	No. of Respondents	Percentage
Very good	1	4.16
Good	3	12.5
Fair	15	62.5
Satisfactory	5	20.83
Total	24	100

Source: Field Survey, 2007.

More than 60% respondents expressed that the function of CFUG is fair, 20% expressed satisfactory, 12.5% expressed good whereas 4% said very good. In general the function of CFUG is fair and effective. Basically respondents made some baseline before saying good or bad. They are resources mobilization, forest condition, community participation, development activities, awareness, motivation and measured the effectiveness in terms of increasing/decreasing forest condition/diversity as well.

5.16 Level of Peoples Participation

Levels of people's participation in community forest management differ significantly with respect to works that is mentioned in the following table.

Table No. 13

Level of People's Participation

S.N.	Nature of works	Participation No. of Respondents		
		Very good	Good	Fair
1.	Plantation in CF	-	24 (100%0	-
2.	Protection of CF	-	19 (79.1%)	5 (20.9%)
3.	Thinning/Pruning	6 (25%)	14 (58.3%	-
4.	Other communal works	1 (4.1%)	9 (37.5%)	14 (58.4%)
5.	FUG/c Meeting	-	21 (87.5%)	3 (12.5%)

Source: Field Survey, 2007.

Levels of participation shows that the motivations, extension and awareness are being disseminated and participation is increasing in any community forest development activities but it depends on the direct benefits of the people such that they will get fodder and fuel-wood from thinning and pruning operations thus level of participation is very high in

this regards. According to informal discussions with labour charge, level of participation is might be increased similarly, if the direct and or indirect incentive is provided to other communal works, the participation will be increased.

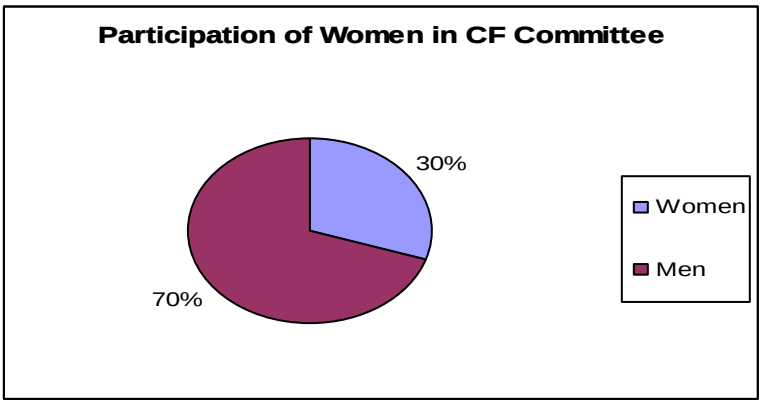
Women's Participation

Almost all respondents released and said that women's participation is good in community forest management activities. They are eager to know rules, regulations and prospects of the community forest. Most of the respondent felt that woman's self interest training, work-shops, study, tours, villagers request and demonstration etc. are the main motivating factors for their involvement/participation. In facts the people's participation is encouraging, so we can xpect the proper implementation of community forest management activities considering the importance of bio-diversity. 60% of the respondents knows the rules and regulation of community forest operational plan and involved in operational plan preparation.

In regard of women involvement in forest user committee of the Salleri FUG, the following chart shows the clear view of the woman participation.

Chart No. 4

Forest User Committee Member



From above charts about 36% women were seemed to be participated in FUC to lead the community FUGs.

5.17 Strength and Weakness of CFUG/C

The strength and weakness of CFUG is presented in table No. 14

Table No. 14

Strengths and Weakness of CFUG/C

Strengths	Weakness of CFUG
⁾ Good forest protection ⁾ Good initiation ⁾ Satisfactory peoples participation ⁾ Unity and commitment for protection ⁾ Increasing awareness ⁾ Consensus in meeting ⁾ Regular meeting conduction ⁾ Transparent fund management ⁾ Improving forest diversity ⁾ Concocted community development activities ⁾ Own office building with well furnished	⁾ Weak leadership ⁾ Poor participation in cases ⁾ Forest products not sufficient for all users ⁾ Non equal responsibility beating ⁾ Poor documentation ⁾ Poor implementation of CFUG ⁾ Less interaction and idea sharing

Source: Field Survey, 2007.

CHAPTER-SIX

IMPACT OF COMMUNITY FOREST ON BIO-DIVERSITY CONSERVATION AND COMMUNITY DEVELOPMENT

The impact of community forest was assessed through direct (Formal discussion/questionnaire) and indirect (personal judgement, informal discussion, key informants survey, triangulation and GAS-PRA) means but only some major impacts are assessed and described.

6.1 Impact on Plantation and Forest User Group Formation

There are 41 VDC and in Panchthar district with the help of DANIDA supported NARMSAP, DFO aims to extend its plantation program through out the district and had implemented its plantation program in the district before 10 years ago.

In the process of implementation, the huge plantation was carried out in the study area. Present major tree species are the outcome of that investment. Now, GN began to shift emphasis from not only establishing plantation but also devel9oping equitable and participatory system of forest management through the establishment of forest user groups and handing over responsibility and authority to them. By now, about 135 GUGs are formed in the district where seven are formed in Amarpur VDC and plantation works are being conducted through participation of FUG member in each community forest. Out of 7 FUGs in Amarpur VDC, studied Salleri FUG had been formed in 2057 B.S. and gradually plantations in open land have been carried out every year.

According to sampled households, due to less economic condition of the FUG, 10 hectors of the area have been planted up to now. Species planted in the forest were Sallo, Utis, Kafal, Chilaune etc. As protection of the

forests is very good, so many regeneration have been arisen and are still coming. After plantation and protection, density of the forest has been increased.

6.2 Financial and Economic Impact on Household

These types of impacts could be measured in terms of time saving to collect fodder, grass leaf litter and other available 7 necessary forest resources. Though it was not assessed directly in my study but I cam eto know after informal discussion with villagers that more than 25% time is being saved for these works now all days. Before protection of the forests people had to walk about 1 hour to collect forest products seven for leaf liter. Now they can collect one Bhari leaf-litter within 20 to 30 minutes from their forest. It helps to engage them in full time (10am to 6pm) in their agricultural and business works as direct positive impacts on economic and financial aspect. Altogether 19 respondents told that their time was saved and they were using that time in agriculture as business works for their livelihood.

6.3 Impacts on Fuel-wood Collection

Precious plantation offers the potential to provide considerable amount of fuel-wood as compared with the degraded sides on which they were generally established. It is reported that fuel-wood could be harvested in the from of branch pruning in the sixth year after establishment with the first removal of multistems and thinning taking place in ninth years. They reported that nearly 12 ron/hac. of oven dry biomass were able to be harvested in the first 10 years leaving the standing biomass of 26 tons per hac. There is all little other yield information available for older plantation under appropriate treatment which will both generate regular fuel-wood and provide adequate silvicultural care for later timber harvest. nevertheless such yield estimates for fuel-wood resulting from pruning

and thinning by year from establishment will depend on the site, plantation stocking/survival general management (participatory weeding and animal management) and harvesting intensity. In sampled households, 16 households supplying their fuel-wood demand from the community forest in combination with agricultural residues where as 8 HHs are really suffering from the fuel-wood scarcity but it can be solved after 2-3 years of CF management. These are the considerable positive impacts of community forest because yield is increasing after protection.

6.4 Impacts on Bedding and Composting Materials

Households in the study area use all combination of dry leaf-letter, non-palatable green vegetative material, crop residue and remains of uneaten fodder as animal bedding. This animal bedding, rich in animal manure and urine, is composted in heaps and spread on fields once or twice all year before planting. The majority of bedding materials originates from forest, shrub-lands and grasslands. The importance of bedding materials and compost was apparent amongst the sampled households. Only 5 respondents in sampled HHs have on need of such materials.

Community forest has made some important impcts on supply of bedding/leaf litter materials in a number of ways by establishing sustainable forest management option and equitable distribution of forest products. Under FUGs, forest management has been guide by operational plans agreed by the members who aim both for sustainability and equity. In these forest area where pine plantation has been established, pine needles are often used for animal bedding and rest of the arrest of the areas where broad leaved species have been established naturally, the fallen leaves of these species are heavily used for bedding materials which helps to increase and or sustained agricultural yield annually that might help to increase the agric bio-diversity in the long run.

6.5 Impacts on Fodder (Forage, Leaves and Grasses)

After fuel-wood in sample households, 19 households considered that fodder is their most products. Scarcity of leaves/grosses/forage/fodder was the most frequently raised problem of the FUGs. It is basically very important for cattle, buffaloes, goats etc. which are kept either for milk production, meat production and or socio-economic support. Fodder/forage hrvesting is equally important for bio-diversity conservation and community development. Out of 24 sampled households, 19 households told that community forests are the beat possible sources to fulfill basic needs of fodder and forage and they are getting these products from their community forest in regular basis.

6.6 Impacts on Other Biological Resources

All sampled households realized that after protection of the forest as community forest, the number and distribution of species are increasing. about 40 trees and shrub species were recorded in the study area. Where as people hardly remembered ten frequently abundant species in these forests before ten years. Likewise, faunal diversity is also significantly increasing. Some mega vertebrates e.g. leopard, deer etc. are seen commonly after forest protection which seems other avifauna, herpetofuna and insects might also have increased. So, in depth, study on other biological resources is needed to explore for understanding the realistic change. In nutshell, this study was also concluded that there is very positive impact on biological resources after implementation of CF activities.

6.7 Indirect Impacts on Household Income and Household Labour

Though this study is not sufficient to draw the conclusion in this regard but it is seen in the village that people have surplus time about 2 to 4 hrs.

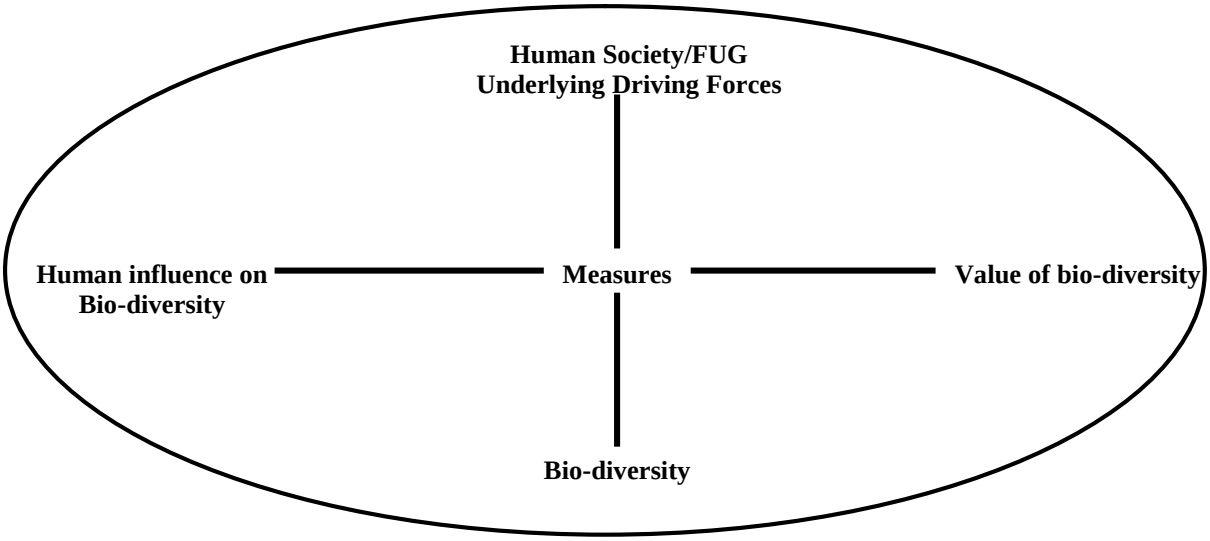
per day from leaf litter collection, ground grass collection and even from fodder collection. They can use this time in other works either in household labour and/or other income generating activities. So the in depth analysis is needed for final conclusion but general community forest has very positive impacts on these regard as well.

6.8 Forest User Groups and Bio-diversity Conservation

The bio-diversity represents the very foundation of human existence. The following figure also illustrates how the human society and bio-diversity interact with each other, (Heywood and Baste, 1996). Perhaps humans have been continuously influencing bio-diversity either in the context of own livelihoods or for satisfying some of their luxury. But bio-diversity is not valued equally by all human societies due to socio cultural difference. Hence we need to understand this cycle of interaction for the sustainable use and equitable sharing of benefits derived from bio-diversity. That is the basic criteria to sustain the community forest.

Chart No. 5

Interaction between Human Society and Bio-diversity (adopted from Hey Wood and Baste, 1996)



We can manipulate the forest user groups influence in place of human influence on bio-diversity model. Later this figure indicates that FUGs are the key factors and the stakeholders of the community forest. They can influence to conserve or deplete the biological diversity in that particular area so the better the knowledge of the user groups on the value of bio-diversity the larger the possibility to draw the essential steps for its conservation perspective.

6.9 FUGs and Community Development

This study is also aimed to explore present and potential impacts of CF on community development activities particularly to the FUGs. Similarly, different modern forest science technology can be transferred cost effectively and timely through CFUG. Different training's; workshop, study tours, and interactions could accelerate the development intervention to villagers through community forestry concept. More than 10 respondents have visited different community forestry practices in

central Nepal and they are very enthusiastic to develop their community forest as manor income source for their rural livelihood. The increasing strength of FUG/c as autonomous institution can assist other community developmental works and these can be developed nicely in the study area. Complete structure in addition fulfillment of basic needs. Water quality improvement, temple construction, chautaro landslide and erosion controls at the direct positive impact assessed in the study areas which are the preliminary and essential aspects of forest activities. The community development works done by CFUG are shown in Annex.

Community development activities are the relative function of local government and total forest user groups in that particular area. It means FUG can directly involve in development activities so they can accelerate development works very rapidly if the physical resources, formal authority and responsibility is provided. But sometimes FUG can involve voluntarily for some development activities like school construction, drinking water facilities, and chautaro construction, religious temple construction health-post construction etc. It depends on attitudes and perception of user groups. If they are actively/popularly motivated they can ask the resources and questioned the development authority ton implement the development plan in right time. So, the forest user groups an autonomous entities/bodies, are the indispensable part of community development activities in rural areas.

6.10 People Attitude Towards Bio-diversity Conservation and Community Development

It is obvious that there is very significant difference in attitudes of different people in all specific subjects but the consensus can be developed in a single program. There is very positive attitude of people

regarding the bio-diversity conservation and community development in the study area which is describe below in table.

	Description	+ve	-ve	Neutral
A	Bio-diversity conservation			
	Impacts of existing floral and faunal composition	24 (100%)	2 (4.76%)	1 (1.88%)
	Impacts of Daily consumption pattern of forest resources	38	2	2
	Impacts of NTFP and its present user pattern	32	8	12
	Impacts of Medicinal collection and present user pattern	22	8	12
	Others	15		27
B	Community Development Activities			
	Potentiality of road construction/trail improvement	29	8	5
	Potentiality of Health campaign	22	5	15
	Potentiality of formal/informal education	25	5	12
	Potentiality of electricity extension	5	7	30
	Others	1	1	20

Source: Field Survey, 2007.

People have considerable positive attitude towards bio-diversity conservation and community development through community forest

concept. They desire diversified and well stocked forest in future. They realize that the species diversity is increasing significantly in this CF. 90% of the respondents suggested that it is necessary to control fire and harvesting pattern and have to do plantation, proper thinning, pruning, NTFP plantation, some areas left as undisturbed for bio-diversity maintenance and other different habitat improvement techniques to conserve the bio-diversity for further generation. For this aspects DFO should have to provide knowledge about the meaning, role and importance of bio-diversity through various training's, workshops, seminars, meetings and others assembly and have to provide the incentives and physical resources for community to conduct related development activities. Proper recognition of FUG/FUC an autonomous, authorized and self governing organization is necessary essential from local government bodies so that can plan, manage, and conduct various community development activities themselves consulting NGOs/INGOs and other GOs. These opinions were of 22 respondents in total of 24.

6.11 Successful and Potential Community Development Activities through FUG

The successful community development activities those have conducted by the CFUG are papal Chautari construction, temples of Ganesh and Saraswati temple, community toilet construction which are shown in annex. FUG is planning to conduct different community development in future. Different income generation activities such as co-operative registration for Jaributi and dairy milk marketing, on timber forestproduct utilization and management, volunteer support on drinking water facilities, improved cook stove installation, improved livestock raising, agri-horiticulture development are the potential community development activities which was felt by the CFUG in study area.

6.12 Bio-diversity Status, Public Concern and Future Visioning

The forest conditions are improving in terms of specters diversification and growth of individual species. It can be improve more after application of complete protection and efficient management tools. Basically, people desired diversified, well-stocked and heterogeneous forest in future. The villagers want to develop their community forest to enhance the tourism for well fore of livelihood of local users. The visioning of the respondent assessed by asking them through questionnaire and found that their forest must be diversified, well stocked, dens, with maximum growing stock and better in all respects after 20 years more.

6.13 Expectation of Farmers (FUGS) from the DFO/NARMSAP

- Technical supports are needed in the field of agro-forestry, community forest management, IGA activities and tourism management.
- They desire the easy availability of seeding of fodder and multipurpose tree species.
- Required some IGA plants and major NTFPs plants, which are suitable to cultivate and manage in their FUGs.
- People are demanding regular field visit by technicians and sometimes by expert to provide timely advice to the users and regular training an related fields.

CHAPTER-SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATION

7.1 Summary

Forest of Nepal has great importance in fostering the agricultural system and in protecting the hilly and fragile land of Nepal. Most of the forest of the country is being managed as communal forest by users themselves on the basis of locally accepted indigenous/traditional system before was nationalized in 1975. For the last two decades community forestry programmed has been adopted as one of the major strategies for managing country's forests. Community forestry in Nepal has become the most important program within the forestry sector with the approval of master plan for the forestry sector in 1989, enactment of the 193 community forestry legislation and agricultural perspective plan in 1997. The local communities as forest user groups have entrusted with the responsibilities of management, development trend utilization of the forest resources to their proximity. To date more than 9000 FUGs are managing about 6.5 lakhs hectare of community forest in the country. Community forestry has various impact on bio-diversity conservation and community development in the country. A great national and international interest is paid for the conservation of bio-diversity. Nepal began establishing a system of conservation reserves in 1970's aimed at conserving a representative sample of existing bio-diversity by protecting reprehensive arrays of ecosystem from human manipulation.

In spite of vital significance of bio-diversity conservation for own existence, the community forestry programmed don't encompass potential bio-diversity conservation and community development within objectives

of forest management directly. Thought Nepal is significantly rice in both flora and fauna diversity, it is not an expectoration to the problem of bio-diversity loss.

During the research of Salleri community forest, the researcher has set some research questions, which are (1) Are people really aware of bio-diversity conservation? (2) What are the problems of FUG in managing community forest? (3) Are community forestry really supporting in the bio-diversity conservation? (4) What sort of activities is initiated by FUG for development of themselves? (5) Are community forestry supoortive for community development activities? (6) What are the impacts of community forest in the rural people?

The main objectives of the research were to analyze the impact of community forestry on bio-diversity conservation and community development activities. This study tried to focus on the existing vegetation status of community forests, attitude of forest user groups toward bio-diversity conservation and community development activities that was initiated by forest user groups in the community. To fulfill these objectives, Salleri community forest of Amarpur VDC was selected as research area. Twenty-four household members of Salleri community forest user groups were taken as sample and other key informants like ranger, teachers and VDC members were visited. This study covers both sociological aspects of community forests user groups and biological aspects of community forests. Basically sociological aspects covered by household questionnaire survey, informal. And of formal discussion with forest user groups and committee members, observation and biological/vegetation aspects covered from detailed forest inventory record in the community forests. For more information, primary as well as secondary data were collected. Qualitative data were also tabulated and

analyze simple statistical tools were used for quantitative data analysis. The research area, Salleri CF, covers only Amarpur VDC, so generalization may not be valid for all mid-hills region of Nepal. This is only exploratory and descriptive research and all facts of bio-diversity were not covered by this study. Species identification and nomenclature work was not completed due to lack of technological expert.

The perception and attitude of people is very positive towards bio-diversity conservation. They desire diversified, well-stocked and dense forest resources in their community forests. Similarly, people are very interested on community development through forest user groups but decentralization of the authority and physical resource; have to be provided from local government sector. There is very good institutional strength and decision-making capacity within and between the forests user groups. The overall impact of community forests seems very positive and encouraging. The forest bio-diversity status (flora and fauna) is also increasing after the establishment of community forest management system. This whole study was completed within seven months time due to limited time frame in research purpose though it was not sufficient to analyze in depth bio-diversity status.

- The community development activities through FUG have been done in satisfactory manners and have made further plans for community development in their society.
- They are very much interested and motivated to manage their communities' forest incorporation other development activities simultaneously.

- FUGs have regular meeting general assembly, and also have other records and minutes in office building. So social management in this FUG is satisfactory manner.

- There is no base line and already documented information about the status of bio-diversity but people realized and expressed that there were less in numbers and/or frequency of different system.

- Total no. of forest users are more in compassion to forest area, so the forest is not capable of supplying forest products as they have demanded.

- The forest user groups in heterogeneous in terms of ethnicity and homogeneous in terms of religion.

- Few of the FUGs are not so active in development activities conducted in the community forests.

7.3 Recommendations

Based on the findings of the study, following recommendations are suggested:

- More extensive awareness and community training should be conducted by district forests office to make active to passive users. Disadvantaged groups should be given position in user committee to avoid caste discrimination.

- Woman participation in decision-making should be increased through awareness. They should be encouraged to hold responsible in user committee.

- Forest user committee and forest user group should change the existing rules of one representative from one household to the compulsory participation of all users in group meeting or assemblies.

- The proper community forest management activities should be conducted annually and periodically.

- The knowledge about the importance of bio-diversity have to be disseminated to FUG/c so that they can be able to conserve, protect. And utilize these resources as supplement of community development activities.

- The local political body or local government should have to co-ordinate and integrate their development budget with CFUG and full responsibility authority and financial resources should have to be provided to FUG to sustain the development activities.

- It is necessary to increase peoples participation in community forest management activities and others community development activities.

- The knowledge about the bio-diversity and community development should be provided through training, seminar, workshop and other audio-video program.

- User group has given more emphasis only on protection but is not applying management operation effectively. They should increase their participation in forest management.

- Forest user group should keep their relation with other NGO working in Panchthar through which they can get support in forest activities.
- Feasibility study should be carried out about potential IGA and NTFP management and Encouraged them to do IGA in CF.
- Regular field visits by technical staff like APOs, rangers, extension organizers should be increased.
- During last 14 years, this forest is well protected. Social aspect of equal opportunity to all level of the people should be taken as a condition in committee, criteria regarding caste and ethnic group and religion should be included.

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