

CHAPTER – I

INTRODUCTION

1.1 Introduction

Nepal's forests are essential for the well being of rural communities who depend on them for supplies of fuel, wood, poles, timber, fodder, leaf litters and other products. The forest products play a vital role in the rural livelihood (HMG, 1997).

Community Forest can be defined as a forest protected, managed and utilized by local forest user groups. A Forest User Group is a group of people having rights and manages, use and protect an area of forest or an area of land for growing trees. A certificate signed by the district forest officer confirms these rights. Such an area is called community forest. And the Community Forestry programme is the process by which government, through the Department of Forests, makes community forest a reality for rural communities. Forestry sector plays an important role in country's economic development. It is estimated that forestry sector contributes about 17.22 percent of country's GDP through its production as well as environmental services (HMG/N, 1998).

The concept of Forest User Group is the central focus of community forestry. The user group can be defined as a legally recognized group of people consisting of all members of a community that frequently use a particular forest area for various kinds of products or who has been using and managing forest area traditionally. The Forest User Group has to make

consensus decision regarding the management and utilization of forest products (Gurung, 2004).

Community Forest which as part of the national forest, the District forest officer hand over to the user groups for development, protection, utilization and management. The user groups freely fix the price of the forest products.

A vast majority of the population about 90 percent of the total is directly involved in the managing forest as part of their everyday life. Especially, the hill farmers of Nepal are mostly dependent on the forest for firewood, timber, fodder and leaf litter for daily household use.

Community Forestry is now the major programme within the Government of Nepal's Master plan for the forestry Sector. As such, it has become the major strategy for implementing forestry development which is aimed at increasing the supply of forest products to the rural communities of Nepal. Community forestry has been adopted by his Majesty's Government of Nepal (HMGN) in the Master plan for the forestry sector, as the major strategy by which most of the country's forest can be sustainably managed. In the middle hills of Nepal, the government intends to entrust the protection, management and utilization of the forests to the communities that currently use the forests. The underlying premise with community forestry is that if the users are given the responsibility to manage their forest resources, then they will ensure that the forests are widely managed to meet both their current and future needs (Bartlett, 1991).

Forest provides most of the basic goods like timber, fuel wood, fodder, and herbal medicines; it is a major revenue earner of the country, which contribute about 15 percent share of GDP. Nepal is one of the few countries in the world where people are to a large extent dependent on forest resources for their sustenance. It also generates livelihood assets like financial, human resource, social network, etc, to the local people who are dependent on it. The majority of people have to use forest products for shelter, food, cooking, heating, livestock feed, and for compost manure. It is best achieved by the development of the country's natural resources. Forest is one of the highly potential resources for the economic as well as livelihood development of the people in the country (Poudel, 2004).

Forest of Nepal has great importance in fostering the agricultural system and in protecting the hilly and fertile land of Nepal. Community forest helps to FUGs in the case of socio- economic change, environment protection, pollution control, etc. The community forest 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 (Sharma, 1997).

Thus, forest including CF is a major natural resources and a larger number of Nepalese people are dependent on forest based resources for their livelihoods. In this way, a pioneer works of R. Chamber (1993), defined "A livelihood in its simplest sense is a means of gaining a living." It is defined

as adequate stocks and flows of food and cash to meet basic needs. A household may be enabled to gain livelihood through ownership of land, livestock in the house, trees in the private land, and rights to grazing cattle in the community land, stable employment with adequate wages or remuneration or through varied repertoires of activities. These livelihoods are ascribed through their caste or gained knowledge and skill from education, migration or sell of products produced from the resource. Thus care of livelihood can be expressed as ways of living (Sharma, 2004).

Community forest and rural people have wide relation because they are depended between each other. Rural people can not be existed in their society without forest resources. They need forest resources day by day for their livestock, fuel, etc. Thus community forest also existed by the appropriate use and management through rural people.

1.2 Statement of the Problem

Community forestry development is an approach that enables community or more exactly user group to establish of their local forest for their own benefit.

There are 419 community forest user's group (CFUGs) in Bhojpur district and 8 CFUGs in Gupteshwor VDC. Therefore, Guhele Chhopnarayan Community Forest of the Gupteshwor VDC is one of the groups. The overall condition of community forestry has been improving and all people talk about community forest and rural livelihood. Community Forests are more related with rural people and many people are achieving

forest products to fulfill their own basic needs. On the other hand, rural people are managing and protecting of the community forests. Therefore, community forests are growing or increasing day by day. Rural people have obtained different kinds of benefits from CF such as forest products, good environments, natural beauties, biodiversities, etc.

There are various types of management system to conduct and develop to the Community Forest such as sub group formation of CFUGs from main group of Community Forest User Groups (CFUGs), motivation program, training, and participation of CFUGs on CF. activities like nursery preparation, thinning, cleaning, etc.

All of the user groups are attracted towards CF developments and they have received more benefits from CF. Therefore, there is interrelationship between CF and its' users. However, there are some questions in the context of the CF of Gupteshwor VDC that are raised below:

- What is the existing situation/condition of CF?
- How CF is managed?
- How CF resources can be interrelated to rural livelihoods?

1.3 Objectives of the Study

Forest is a renewal natural resource, which provides a wide range of interrelated to livelihood options for rural people. The main purpose of this study is to analyze inter-linkage between forest resources and livelihoods in the middle hills. The specific objectives of this study are as follows:

- a) To identify the present condition of CF in the study area
- b) To explain CF management system
- c) To analyze role of CF resources on sustainable rural livelihoods

1.4 Significance of the Study

There are so many community forests in Nepal. The aim of community forest is to preserve of forest and to get more benefits for local people.

This study provides more informative message about CF resources, relationship between CF and people, socio-economic, culture and other activities of the CF users of the study area. Many people can study this dissertation and they can get some ideas according to their needs. Mainly it helps to Planners, Students, and Researchers. If the Planners want to make planning there, they need basic information about that place and people such as socio-economic condition, cultural, political condition, etc. So that this study will provide basic knowledge about this study area. Although, Students and Researchers can get some benefits from this study. Students need in the case of their study context and in their report writing, thesis paper, etc. for reference. At last Researchers can get more benefits from this study also because they must take such articles in the case of review of literature. They can not conduct their research in the lack of literature review. They need such studies for built up their research foundation.

1.5 Limitation of the Study

The following are the major limitations of this study:

- Source of information is both primary and secondary
- Only FUGs are included in this study
- Finding, results and conclusion will be based on respondent and forest user groups and FUGs committee
- Study area will be only Guhele Chhopnarayan Community Forest of Gupteshwor VDC
- After analyzing collected data, result will be summarized based on whole study area about community forest and changing rural livelihood

1.6 Definitions of some Key Terms/Concept Used

Biodiversity: is the variety and variability of life. It includes diversity in terms of genes, species, ecosystems, and ecological processes that both support and result from this diversity.

Non-Timber Forest Product (NTFP): include all goods of biological origin from forest, grassland or any land under similar use excluding timber examples of NTFPs in Nepal include grasses and leaves; fuel wood; bamboo, rattans and canes; nuts, fruits, tubers and berries; barks; plant fibers; medicinal and aromatic products, resins; insect and insect products; and wild animals and birds.

Enterprise is defined as an organized economic activity with a motive of earning profits. Organized economic activities may include collection of forest products for sale, processing, trading, transporting, and manufacturing undertaken formally or informally. Community based enterprises are those being operated at rural areas, usually near a resource base that supplies raw materials, and that are planned and operated by local communities or individuals who are also the main stakeholders of local biodiversity, the condition of which will have direct effect on them.

Community Forest User Group (CFUGs) means a user group registered for the management and utilization of a community forest.

The term **Forest Management** encompasses both technical and social arrangements involved in the management of forests, including planting, protection, harvesting, and distribution of forest products.

According to Forest Act,1993“A community forest is defined as a national forest handed over to a Users Group for its development, protection, and utilization for collective benefits”. **Equity** implies quality of justice and fairness in which males, females, each caste, class or ethnic group of people and those who have been made disadvantaged and have been deprived access in the past have equal opportunity to utilize, conserve, and make benefit from the forest resources. Equity is a measure of how evenly the benefits and burdens of the community forestry activities are distributed among its stakeholders. Community forestry is also concerned with the empowerment of local people, especially those who are socially and economically disadvantaged such as the poor, women, the elderly and

children. The goal of ensuring equitable distribution or improving the social structure of for equity is one of the distinguishing characteristics of community forestry programs (Subedi, 2006:111-112).

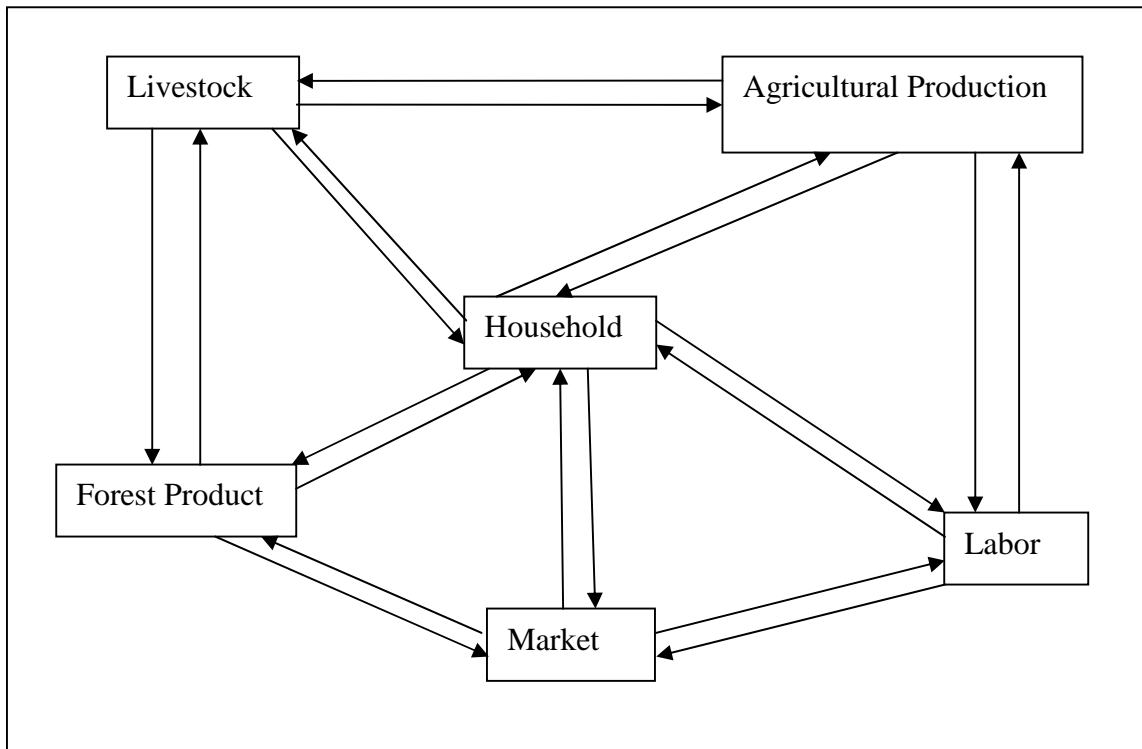
Villagers' incomes and welfare can be improved by developing sustainable, productive forestry and agro forestry practices as well as viable alternative income opportunities. Technologies that combined increased production with sustainability ensure villagers' access to valuable forest, soil and water resources over the long term. These management efforts also address national and international interests in the protection of fragile and rapidly disappearing tropical forests, new source of income give villagers more choices about how to pursue their livelihoods and reduce pressure on forests (Ford Foundation, 1998: 9).

CHAPTER - II METHODOLOGY

2.1 Conceptual Framework:

Conceptual framework is the most important aspect of the study. Every researcher should be cleared about his/her research topic. It helps to researcher to inquiry and discovery about related topic. Therefore, the conceptual framework of this study is given below:

Table 1: Systematic way of forest based rural livelihoods



The conceptual framework of this study is based on system approach. This approach refers to the systematic way of livelihood. Different types of elements are needed for the rural livelihood and they have to depend on each

others. There is wide relationship between each others. They are depended on each others for example, livestock is depended on household and household is also depended on livestock. In this way above all elements have two way relationships among them. At last household is the main factor of this system. Therefore, rural people have maintained their livelihood through this system.

2.2 Nature and Sources of Data

The present study is basically based on the primary data. Other ancillary data are also acquired from secondary source such as reports, news, books, newspaper, etc

A. Methods of Primary data Collection

For the purpose of primary data collection, 50 percent or 56 households from 112 households of Guhele Chhopnarayan Community Forest User's Group of Gupteshwor VDC have been selected. The sample households have taken from the lottery system of random sampling method from the ward no.4, 5, 6, 8 and 9.

i) Sample household survey

To fulfill the proposed objectives, a sample survey was conducted. A sampling survey questionnaire (Annex-1) were developed and administrated to the head of sample household.

ii) Semi-structured interviews with key informants

Semi – structured interviews were conducted with the key informants, such as the Chair Person of CFUGs, Teacher, and Local Leader especially in the case of history of this CF, management, role of CF resources on rural livelihood, changing condition of CF, formation of executive committee.

iii) Focus group discussion

Focus Group discussions were held among the member of forest user's group (FUGs), sub groups of this C.F. The discussion mainly conducted for the present condition, rules and regulation, management and economic activities of the CFUGs of CF.

iv) Field observation

Field observation is also a way to collect information. All information can not complete without field observation. Therefore, observation visits were made for the present condition and management practices of community forest, local settlement patterns and system of using the forest resources. There were different kinds of attitudes and perceptions among CF user groups of Guhele Chhopnarayan Community Forest in Gupteshwor VDC. There were positive expressions and activities on CF users. Then after, the CF was more attractive because of greenery plants and different kinds of birds and wild animals. There were so many noticeable things and noticed on field note in the period of field visit. These observations were recorded on notes and photographs. The researcher involved in the meeting of CF users' group and discussed with them about CF management,

activities, advantage and others and visited on sampled household for interview and observation.

B. Secondary Sources of Information

Secondary sources of information are also important. It is very necessary in the case of research. Secondary data were collected from different sources such as operation plan of community forest, journal, books of district development committee, and books of district forest office, report etc.

2.3 Data Analysis and Presentation

After the completion of field survey, the collected data of the study area was categorized and classification in tabulation form. For the presentation of the report, simple parameter like percentage, average is used to simplify and summarize the table.

Descriptive method is applied to analyze data and statistical method also. Different maps, tables, charts, and diagrams are used to present information scientifically.

2.4 Selection of the Study Area

Guhele Chhopnarayan CFUG of Bojpur district is selected for this study. The rationale of selecting the study area is:

-) Easy access: Guhele Chhopnarayan Community Forest User's Group is located within 5-40 minutes from Gupteshwor VDC.

-) Positive thinking: All of the CF users were participated and managed in their CF positively. They don't have negative thinking towards CF. They can unity to do something about CF.
-) Attractive: This CF looking very nice in the case of physical structure and it has given good environment in the village. Therefore, all CFUGs are attracted towards this CF.

CHAPTER - III

LITERATURE REVIEW

3.1 Review of Literature

This study strives to conclude the condition of community Forest, management system, and relation of community forest resources on rural livelihood.

Singh and Kafle (2000) have concluded the community forestry in Nepal is a partnership between the government, which owns most of the forest land, and the communities which utilize forest resources on a daily basis. The primary partners are the FUGs, often represented by user committees and the District Forest Office (DFO) and Range Posts (RPs). Others involved include local government organizations such as the VDCs, Community Based Organizations, (CBOs), development projects and Non-government side, the Ministry of Forest and Soil Conservation (MSFC) is responsible for formulating policies and co- coordinating forestry sector program and the community and private forestry division (CPFD) of the Department of Forests (DOF) is responsible. The DFO implements community forestry programs in the field with the assistance of forest Ilaka (sub – district) offices and range post.

Baral (2002) has concluded that the aim of the government is to manage and utilize CFs effectively bring the NFs under effective protection and management with the concept of participation. It is already obvious and many authors have already stressed that the modality of CF in the Terai

should be a different one to address the complex forestry problems of Terai. Therefore, it would be appropriate to prepare a simple and understandable policy and guidelines for Terai CF. The CF programme should not be carried out in isolation as a discrete and ad hoc activity. It should bear its importance and practical link in day to day life of the forestry staff. Similarly other types of forest development, e.g. NF can not be successful if there is a missing link.

Provide information and intensive training to district forest staff on various matters related to CF. Improve the capacity of DFO through direct and indirect means for proper planning implementation and monitoring CF programme at the district level.

Yadav (2003) has concluded the perception and attitude of people is very positive towards biodiversity conservation. They desire diversified, well- stocked and dense forest resources in their community forest. 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 forest user groups. The overall impact of community forests seems very positive and encouraging. The forest biodiversity status (flora and fauna) is also increasing after the establishment of community forest management.

Maharjan and Gilmour (1990) have concluded that it is an important to recognize and build on any existing local management Initiatives. Intervention which does not do this may be more destruction than construction.

The political level of panchayat is an inappropriate level for effective local forest management planning and implementation. Concentration on this level marginalizes the real forest users (particularly the poor) and results in the process being taken over by village elite, so that effective management is unlikely to occur operation plans should be produced by the users themselves with the Forest Department, field staff providing a facilitating role and giving technical advice where necessary. Operational Plans should be provide clearly specified quality for the users themselves to implement the provisions of the plan.

Chattarjee (1995) has discussed the Joint forest management is an ideal developmental programme. It will help in changing the position of the women by making them joint members in the FPCs and will also change their condition because it is expected that after strengthening the institution ecology will improve which in turn will improve their economy. JFM programme thus addresses to meet both the practical needs and strategic interests of women and men and finally the quality of life of the village people will improve and the programme will sustain.

Thakur (2001) has concluded on his Dissertation: *The Impact of Commercialization of Community Forestry on the rural community In Nepal*; The poor and disadvantaged groups must be encouraged to

participate in different community forest management activities. The community based organizations should be involved in community forestry to manage the poor and disadvantaged people at the user group level.

The poor and disadvantaged group should be empowered to participate actively in executive committee meeting and users' assembly. Their voice should be respected by the decision maker and the forest user group.

Mikola (2002) has studied on the topic *Community Forestry's Impact on Biodiversity Conservation in Nepal*; He says that biodiversity is new area in community forestry. The programme does not have any activities that directly contribute to biodiversity as such. These results have happened, not by intention, but by practice. The people, the user groups started protecting the forest. As a result we get protection of all species. It has been shown that with good protection, original forest can return.

Gilmour and Fisher (1991) have concluded the forests of Nepal are critical to the well being of the farming systems, particularly in the hill regions where access to alternatives sources of energy for cooking and to material fertilizing agricultural fields is limited. Commercial forestry for industrial usage is largely confined to the Terai, whose remaining natural stands are being rapidly depleted, both legally and illegally. That Nepal's forests are in a sorry state is incontestable. It is also clear that there is a high rate of population growth which is putting pressure on resources.

The fact that community forestry is a social process concerned with the management of forest resources by complex and changing social institutions and organization.

Baral (1991) has concluded the forest activities by local people are mostly limited to protection and the management of existing natural forest. This, in fact, is the most important activity in community forestry. The people's engagement in this type of forestry development work is really commendable, forests near settlements which are not care for by one settlement or another are the exceptions rather than the rule. These forests, though officially belonging to the government, are exclusively divided among different settlements for use, control and protection. Some villager's, however, are known to doing more than protection/ management of existing forests.

Willan (1967) has studied on the topic *Forestry in Nepal*; he has focused that reforestation operations on a wide scale over the country were not feasible and that only course to follow was to confine reforestation to the Kathmandu valley and nearby areas and to treat it as an experimental operation rather than as a straightforward replanting scheme.

Gilmour (1992) has concluded on the topic *Not Seeing The Trees For the Forest: A Re – Appraisal of the Deforestation “Crisis” in Two Hill Districts of Nepal*; this work points out normal misperceptions about the forestry crisis in Nepal. The authors note that while absolute forest cover as measured in crown density may be diminishing in some places (their

obstructions are from Sindhu Palchok and Kabhre Palanchok districts) the actual number of trees may have increased. The difference is explained by the role of private on farm forestry. The piece is frequently cited to balance out common knowledge about Himalayan deforestation.

The author describes the important relationship between farm and forest, and importance of farmers in meeting their own forest product needs. It is an excellent example of how a technical forester uses the methods and perceptions of social forestry to do his job.

Bartlett (1991) has concluded the Nepal – Australia Forestry Project has demonstrated that community forestry is a viable strategy for managing the communal forests of the middle hills. It has also shown that, if the field staffs of the Forest Department are given effective re-orientation training and the necessary district level institutional support, then they can make effective progress in implementing community forestry programmed. That is not to say that rapid progress can be expected to occur in handing over all the forests of the Middle Hills to forest user groups. e.g. Sindhu Palchok and Kabhre Palanchok districts. Where effective mechanisms are now in place, it is likely to be many years before the majority of the estimated 2000 individuals forests are brought legally under user group management.

Fisher and Malla (1987) discuss on the topic *Forestry Work; in Villages*: farming is the main source of livelihood for Nepalese who live in rural areas. Forests are among the most important elements of the farming system in Nepal. Forests provide fuel, fodder, leaf litter, timber and raw materials for industry.

These vital natural resources are being destroyed due to increased demands as a result of population growth and partly due to misuse. All people have different types of problems and those problems must be solution by themselves but it not so easy, for that every person must be involve in different communities and practices. The essential thing is to bear in mind in appropriate purpose, which is to facilitate local control and management of forest resources. Community forest is one of the most important participatory approaches to human being. It means all participants get golden opportunities and lessons from this activity e.g. preparation of nursery, plantation, group discussion, money exchange, investment, about good environment, importance of forest, etc. from these activities.

Sharma (2004) has concluded on the topic *Improving Charcoal Production for Sustaining the Livelihoods of Blacksmiths*; in the context of rural energy, environmental problems emanate from poverty. Energy policy should aim at fulfilling the basic needs of the people including energy, and improving the production capacity of local forest resources in meeting the local energy needs. The approach should be oriented to promote indigenous technology and inputs, utilize local raw materials, human power and local institutions, and development and identify appropriate technologies that are affordable to the poor people. This should be sustainable from both resource utilization and environmental perspectives.

Ghimire (2002) has studied on the topic *The Contribution of Community Forest Resources on Household Income*; Community forest resources are more valuable to the poor as there are resources accessible to

them. However, as community forests increase in resources, the poor are likely to be marginalized and their access reduced. It is necessary that adequate institutional mechanisms are ensured that the poor have sufficient access to these resources. If it is possible community forestry resource can be a measure for poverty alleviation in the country.

Chetri and Rana (1995) discuss on the topic *A Gender Analysis of Women's Participation in Community Forestry*; Community Forestry has reduced the workload for men and women in collection of forest products, particularly fuel wood and timber. Community forest plantations have also provided opportunity for broadleaf species to regenerate. Then after improved cook stoves are gaining popularity, decreasing the demand for fuel wood and reducing health risks from smoke.

Shrestha (2005) has studied on the topic *Impact of Community Forestry on the Socio-economic Condition of the Community Forest Users*; At first by the good activities of CF all CF resources regenerated and then after poor peoples have benefited by CF. Community forest resources collected very easily but before CF that was not possible. Then after increased in biodiversity also and due to this activity, the community, who once had to face water scarcity, has now easy access to the irrigation and drinking water. Regarding the Livestock, the number of livestock has not been increased because of grazing problem, cost of hay and lack of caretaker for livestock. Agriculture and government service are major source of income of the community forest users.

Subedi (2006) has concluded in developing countries, gradually two approaches of biodiversity conservation are adopted. The traditional approach is to make protected areas, in which all kinds of regulatory measures are taken. The other approach emphasizes the effective role of local communities in biodiversity conservation. The second approach of conservation focuses on biodiversity linked enterprises that generate meaningful income for improving the livelihood of local communities. Apart from this, an analysis of the potential of non timber forest products (NTFPs) at country level was made.

In the study on enterprise – oriented community forest management (EOCFM), the major question addressed was whether it can improve the livelihood of local communities as well as biodiversity conservation. The factors required to achieve this goal were also analyzed.

In spite of enormous biological wealth, Nepal is one of the poorest countries (per capita GDP estimated at US Dollar 269). Agriculture is the mainstay of the economy providing livelihood for 80% of the population and accounting for 50% of national GDP. However, in mountains agriculture accounts for less than 10% of geographical area, it is primarily rain-fed and is able to meet food grain requirements of local people for less than 6 months. People derive fodder, firewood, and litter (for maintaining crop field soil fertility) from the forest.

Community Forest is one of the main natural resources for rural people. Therefore, they are mentally or physically participated in the

community forest and its different activities. According to different studies, mainly women are primary users of CF because the CF resources are collected by women such as fuel wood, fodder, leaf litter, etc.

Community Forest is a benefit able to the nation and rural people. CF users pay fix cost to government for obtain essential CF resources such as timber, poles, fuel wood, herbs etc. However, rural people also get some benefits from Community Forest. CF has been more essential in rural areas therefore every CFUGs are dependent on CF resources and maintaining their livelihood. Therefore there is interrelationship between CF and rural people. Those forest products related with livestock and agriculture also. There are disadvantaged groups and lower castes that are not able to maintain their better livelihood. But they are benefited by CF and sustaining their livelihood easily.

Many years ago rural people were busy in their full time in the collection of forest products but now decreasing CF resources collecting time after managing CF due to alternatives way of fuel wood, proper management of livestock, and strict rules and regulation of CF committee. Different kinds of studies have been completed about CF and still there are some studies are able to do. Some points are able to study such as the relation between CF resources and rural people, proper management of CF and the rural perceptions towards CF. This study tries to fulfill those gaps.

CHAPTER – IV

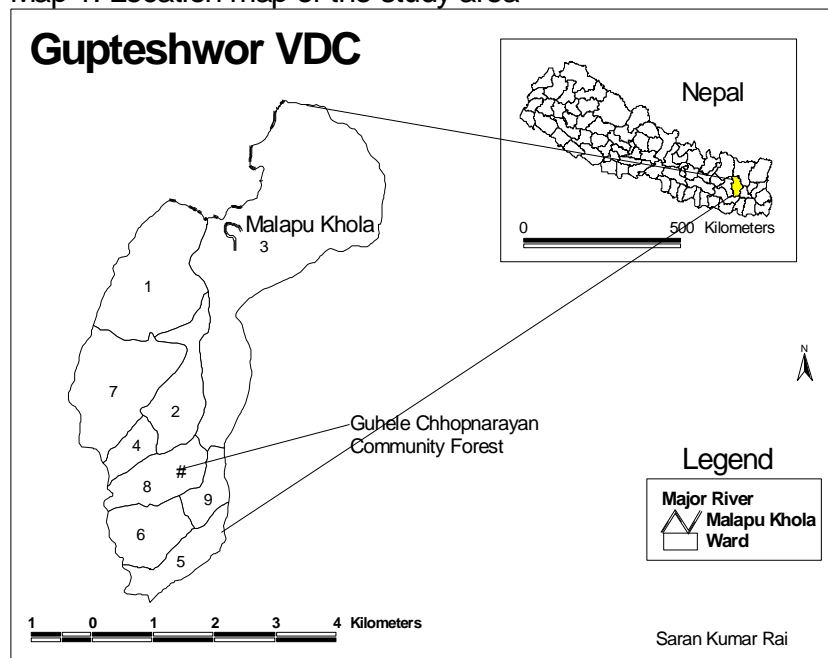
BACKGROUND OF THE STUDY AREA

4.1 Location

Gupteshwor VDC is located in western part of Bhojpur district of Koshi zone. It lies in Eastern part of Nepal. Geographically, it lies between 27°00' to 27°15' North Latitude and 87°00' to 87°15' East Longitude and the study area about 1400m. Altitude from sea level.

Gupteshwor is one of the largest VDCs of Bhojpur district out of 63 VDCs. This village lies about 15km. west from Bhojpur headquarter. Guhele Chhopnarayan Community Forest lies in the ward no. 8 of the Gupteshor VDC of Bhojpur. The user groups are extended among five wards; they are 4,5,6,8, and 9 of the VDC. Location map of the study area is given below:

Map 1: Location map of the study area



Source: GIS Lab CDG, TU Kirtipur, 2065

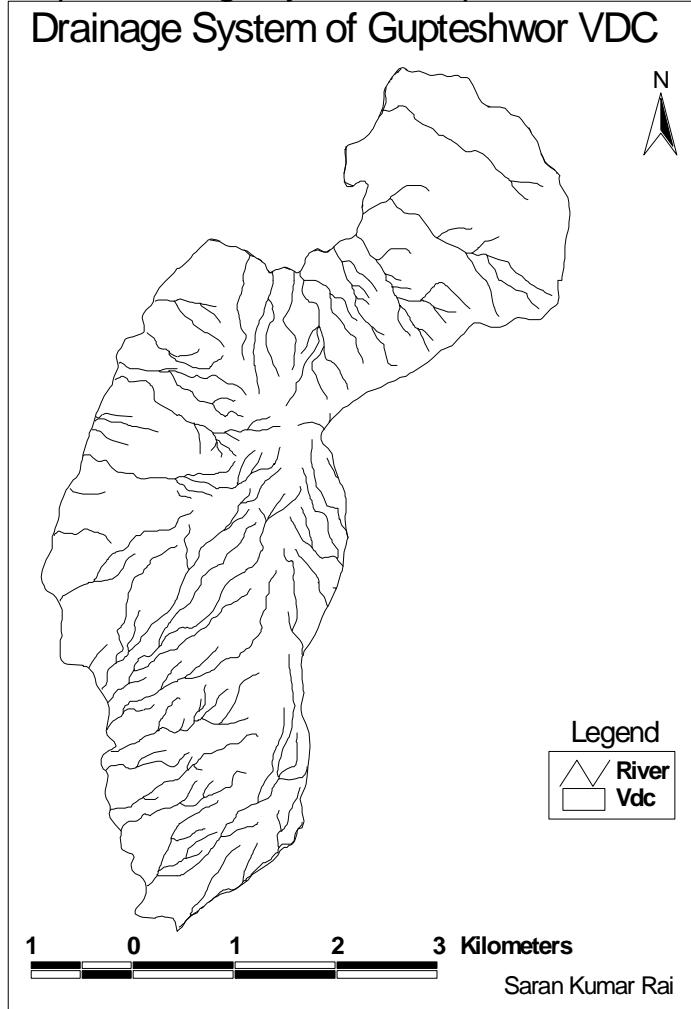
4.2 Landform

Gufteshwor is a VDC of Bhojpur district. The landform of this VDC is hilly therefore; it lies in the hill region. It has no flat area, it has approximately more than 30 ° slope and total land face has southward aspect. The altitude of this VDC ranges from 1080 – 2200m above mean sea level. The shape of this VDC is in the form of vertical or linear pattern. The lower part of this VDC is starting from the riverside and there is warm temperature and higher part is ended with high peak and there is very cold temperature.

4.3 Drainage

This VDC is drained by rivers and streams (Khola) the main rivers are Pikhuwa and Malapu. Pikhuwa River is a large and clean, flowing southern part of Gupteshwor VDC. Malapu river is flowing western part of this VDC and it meets with Pikhuwa and both are flow together continuously. Other various streams are flowing within a Gupteshwor VDC, such as Tinchge khola, Saune khola, Tamtam khola, Chhopnarayan khola, etc. All rivers and streams meet with Pikhuwa River and it is also flows with Arun River towards east side from the study area. The map of drainage pattern is as follows:

Map 2: Drainage System of Gupteshwor VDC



Source: GIS Lab CDG, TU Kirtipur, 2065

4.4 Climate

Generally, Monsoon effects in Nepal. Gupteshwor VDC is affected by Monsoon climate also. Summer is wet and winter is dry. The annual rainfall of this VDC is 1005.9mm.to 2123mm. and average rainfall is 1208mm. Maximum rainfall occurs during June-July and Minimum in November-December. The temperature of Gupteshwor VDC is Maximum 32.2 ° c, Minimum 0.1 °c and Absolute Humidity 90% in Summer and 50%-70% in Winter.

4.5 Natural Resources

Forest is a renewable resource. It provides different kinds of benefits to the local people. Such as natural beauties, pure oxygen, raw materials, etc. Mainly two types of forest can be found in the Gupteshwor VDC. They are temperate and cool temperate forests. Temperate forest found in the lower part of Gupteshwor VDC with the altitude ranges from 1000 - 2100 meters above mean sea level. The major tree species are Uttis, Salla, Katus, Lakuri, Chilaune, etc. The cool temperate forest can be found between the altitude about 2100-3300 meters which includes the main species Uttis, Devdar, Pine, Gobre Salla, Gurans etc. Gupteshwor VDC includes other different types of natural resources Viz. River, Soil, Mines, etc.

4.6 Distribution of the Community Forest

Gupteshwor VDC has many community forests. Ten years ago, there was no growing stock of forest products due to the lack of effective protection of forest by government. At that time was not appropriate use of forest resources. When district forest office has extended the community

forestry programme in the study area. Since then forest condition has been improving. There is 263.24 hectares of community forests and 817 households and they are affected by community forests. Distribution of CFs in Gupteshwor VDC has shown in table 1:

Table 2: Distribution of CF in Gupteshwor VDC

S.N.	Name of C. F.	Households	Area (Hectares)	Ward No.
1	Tinchange Malapu CFUG	185	90	1,2
2	Sepile CFUG	30	119	1,2,3
3	Aphyare Hattikharka CFUG	265	2.75	3
4	Champire Chiuribhir CFUG	62	6.9	5,6,7,8
5	Jhilkeni CFUG	40	19.36	7
6	Baghmara Tinchange CFUG	86	20.15	8
7	Guhele Chhopnarayan CFUG	112	4.43	8
8	Ramite CFUG	37	1.46	8

Source: DDC Profile, 2062.

4.7 Population

The total population of Gupteshwor VDC is 2336 in which 1128 are male and 1208 were female according to the DDC profile 2062 BS. The total household of this VDC is 817. There are female percentage is more than

male. Female percent is 51.71% and male percent is 48.29% based on the DDC profile 2062 BS.

CHAPTER – V

SOCIO-ECONOMIC CONDITION OF COMMUNITY FOREST USERS

Most of the people of Gupteshwor VDC are depended on agricultural production. They produce different types of crops such as paddy, millet, wheat, maize, barley, potato, etc, in different seasons. Mainly, paddy is the important crop in this area. A few households also depend on government job, business, wage labor, etc. There are various ethnic groups and they have their own cultural activities and religion also.

5.1 Age and Sex

Totally 330 people have surveyed among CF users of Guhele Chhopnarayan Community Forest. There is 51% male and 49% female and age and sex composition of the study area is shown in table 2:

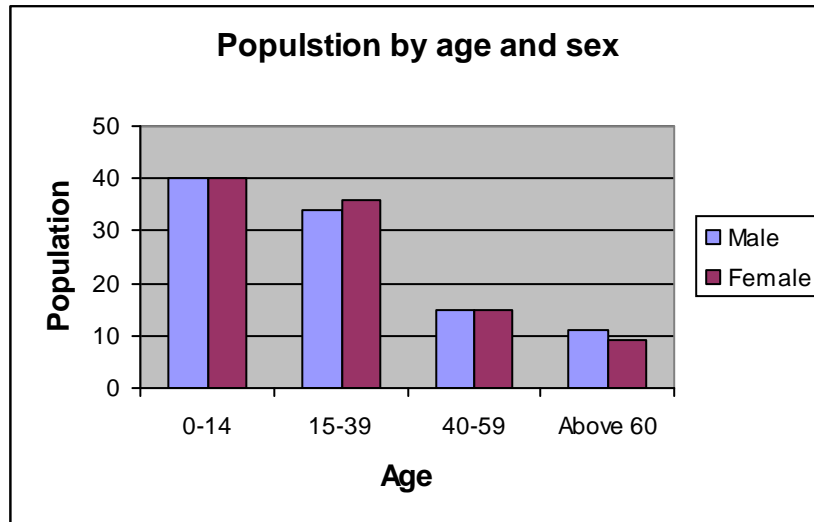
Table 3: Distribution of population by age and sex

Age Group	Sex		Total (%)
	Male (%)	Female (%)	
0-14	67(40%)	64(40%)	131(40%)
15-39	57(34%)	59(36%)	116(35%)
40-59	25(15%)	24(15%)	49(15%)
Above 60	19(11%)	15(9%)	34(10%)
Total	168(100%)	162(100%)	330(100%)
	168(51%)	162(49%)	

Source: Field survey, 2064.

Above table shows the distribution of population by age and sex. The higher number of population is in the age group 0-14 where there is 131(40%) out of total population. 15-39 age group has showed also large number of population there is 116(35%) population. These groups include young population. Therefore, they have obtained more population than others. The age group above 60 is going to decrease, it has 10% only. There is 51 percent of male and 49 percent of female in the total population.

Figure 1: Population by age and sex



Source: Field survey, 2064.

5.2 Ethnic Composition

Gopteshwor VDC predominantly inhabited by different ethnic groups. There are different types of caste/ethnic groups in Gupteshwor VDC; it comprises Rai, Newar, Chhetri, Brahmin, Magar, Damai, Kami, Sarki as major caste of the VDC. According to the DDC profile, Rai is the dominant

ethnic groups in this VDC with 38 percent of total population. Caste/Ethnic composition is given in table 3 below:

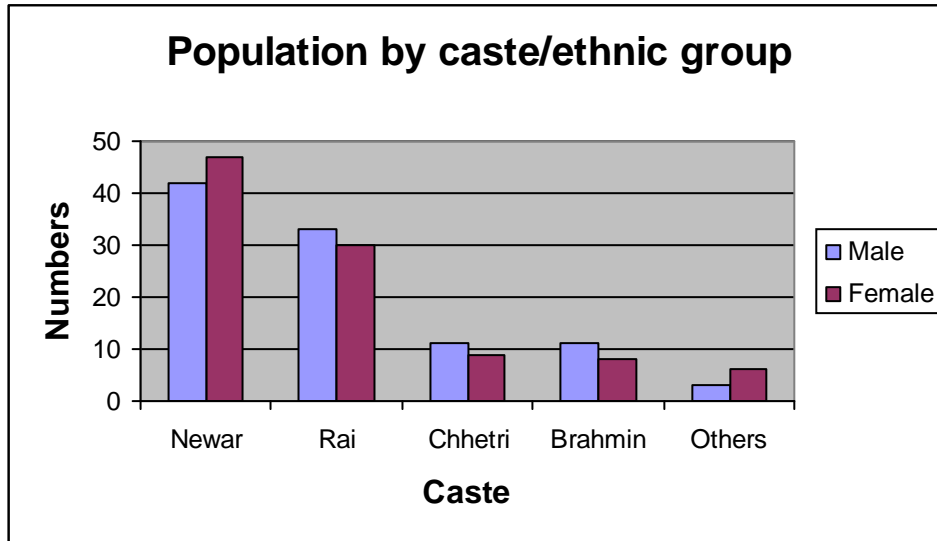
Table 4: Caste/Ethnic composition

Caste	Male(Percentage)	Female(Percentage)	Total(percentage)
Newar	70(42%)	76(47%)	146(44%)
Rai	55(33%)	49(30%)	104(31%)
Chhetri	19(11%)	14(9%)	33(10%)
Brahmin	19(11%)	13(8%)	32(10%)
Others	5(3%)	10(6%)	15(5%)
Total	168(100%)	162(100%)	330(100%)

Source: Field survey, 2064.

Above table shows the caste/ethnic composition of the CFUGs of the Guhele Chhopnarayan Community Forest, Gupteshwor VDC. According to the table Newar caste is the dominant group with 44 percent among the community forest user groups. It includes 42 percent male and 47 percent female. Brahamin and others are in lower percentage of the population. They have 10 and 5 percent respectively. Rai percentage is 31 and Chhetri percentage is 10. Therefore, above table concluded that Newar people have involved more than other people in Guhele Chhopnarayan Community Forest. Generally, this CF has included all kinds of caste/ethnic groups. Therefore, all forest user groups interested to do better management, protection and utilization of this community forest.

Figure 2: Population by caste/ethnic group



Source: Field survey, 2064.

5.3 Family Composition

Mainly, the family size depends upon the economic, cultural, educational, etc status of the people. Generally, lower the economic condition higher the family size, higher the economic condition lower the family size. Culturally, some people have large family size and educated people have no large family size and uneducated people have large family size. However, the family size of the study area is given below:

Table 5: Family size

No. of family members	Household (percentage)
1	2(3.57)
2	1(1.79)
3	1(1.79)
4	10(17.86)
5	11(19.64)
6	13(23.21)
7	7(12.50)
8	6(10.71)
9	1(1.79)
10	2(3.35)
11	1(1.79)
12	0(0.00)
13	1(1.79)
Average family size 5.89 members	

Source: Field survey, 2064.

Table 4 presents the family size of the sampled households in the study area. The family size is ranged from one to thirteen members. Where, there were ten respondents with four members in the family, eleven respondents were with five members, thirteen respondents were in the group of six members, then seven and six respondents were in the group of seven and eight members respectively. The average family size is 6 per family in the study area.

5.4 Religion

Religion is most important aspect of the human being because it provides better inspiration to the people. Every caste and people wants to accept their own favorable religion, such as Hindu, Kirat, Buddhist, Christ, Jain, etc.

Gupteshwor VDC is one of the multilingual and multi caste VDCs. Therefore, there are some religious groups in this VDC. This VDC comprises Hindu, Buddha, Kirat, christ, etc. This VDC is dominated by Hinduism. The total percentage of Hindu is 64% out of total population (DDC Profile, 2062). However, the religious condition of the sampled respondents has given below:

Table 6: Religious conditions

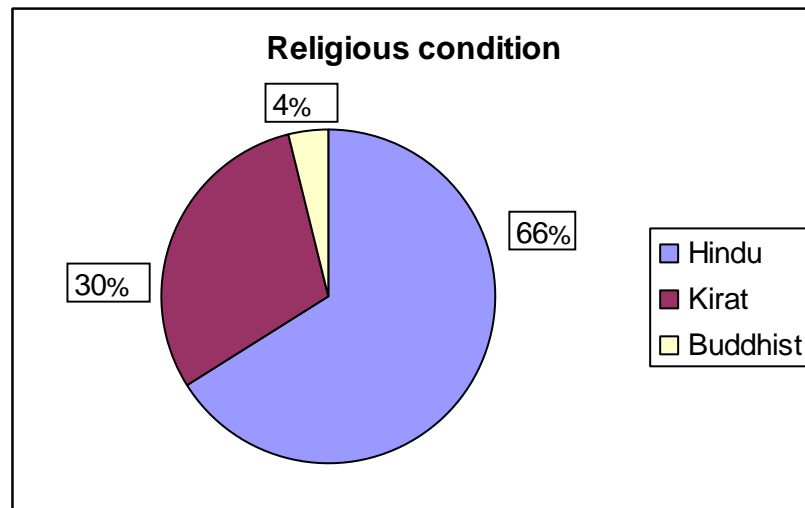
S.N.	Religion	Total Respondents	%
1	Hindu	37	66
2	Kirat	17	30
3	Buddhist	2	4
4	Total	56	100

Source: Field survey, 2064.

Above table shows mainly three types of religions such as Hindu, Kirat, and Buddha. Hindu is the most dominant and it takes 66%, Kirat 30%, and Buddhist 4% in the study area. This table also indicates most of the CFUGs are affected by Hindu religion. On the other hand, there is dense population of Kirati people and they have accepted to the Kirat religion.

Therefore, Kirat religion has also covered in large scale. Buddhist are not in large number of scale in the case of religion.

Figure 3: Religious condition of respondents



Source: Field survey, 2064.

5.5 Education

Education is the most important for the people to interact, dealing with social environment. Every people can not make wise decision in different fields without education. Education makes people intelligent and wise person in the world. Therefore, it has surveyed about literacy condition of the study area. The education level is categorized into six parts. At first can read and write, then can not read and write, primary, lower secondary, secondary and last one is above SLC. However, the literacy condition of the study area is shown in table 6 below:

Table 7: Educational condition

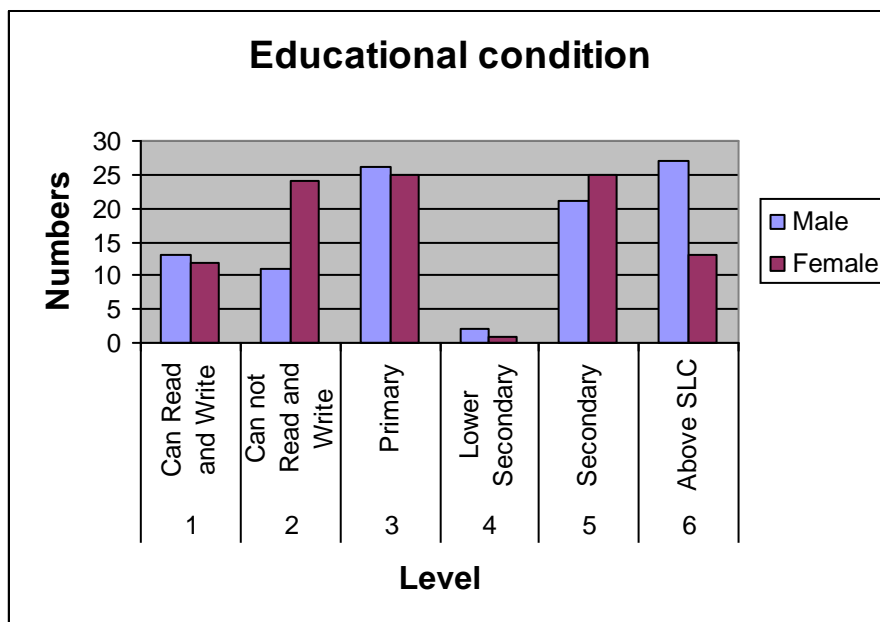
S.N.	Educational Level	Male	%	Female	%	Total	%
1	Literate	21	13	19	12	40	12
2	Illiterate	19	11	39	24	58	18
3	Primary Level	43	26	40	25	83	25
4	Lower Secondary Level	4	2	2	1	6	2
5	Secondary Level	36	21	40	25	76	23
6	SLC and above	45	27	22	13	67	20
7	Total	168	100	162	100	330	100

Source: Field survey, 2064.

Table 6 shows the educational profile of the sample population. There are 25 percent people with primary level of education. This table shows that the greater number of population included in primary level of education. 12 percent can read and write, 18 percent can not read and write, 2 percent in lower secondary, 23 percent secondary and 20 percent in above SLC.

This table concluded that male percentage is greater than female percentage in above SLC with 27 percent and 13 percent respectively. And female percentage is greater than male percentage in the secondary level with 25 percent and 21 percent. Therefore, it found that lower the educational level higher the number of female, higher the educational level higher the number of male.

Figure 4: Educational conditions



Source: Field survey, 2064.

5.6 Economic Condition

Economic condition is the most effective in the human society. Where the better economy, there will be more easy and comfortable life. Therefore, it depends on basically occupations for examples business, industry, agriculture etc. and it depends on other factors such as educational, social, geographical and local environment which influence in each and every aspect of human life. Economic conditions determine the living standard of the people. It is essential to examine the various occupations of the people in order to know the economic condition of the village. However, the main income source of CFUGs is as shown in table 7.

Table 8: Main income source of respondents

S.N.	Income source	Respondents	%
1	Agriculture	36	64
2	Government job	7	12
3	Business	7	12
4	Others	6	11
5	Total	56	99

Source: Field survey, 2064.

The table no. 7 shows the main income source of respondents. Agriculture is the main income source in study area. Because the table shows 64 percent of the people have agriculture as main income source. Then after, government job, business and other sources with 12 percent, 12 percent and 11 percent respectively.

5.7 Occupation

Occupation is the most essential achievement of the people. Everybody must be done hard work for better occupation. According to occupation, people have different types of life style and maintained their livelihood.

Most of the people are engaged in subsistence agriculture. Agriculture is the main occupation of the study area. Along with agriculture, people have alternative jobs also. Nowadays, most of the people are conscious towards education and they have taken knowledge and obtained facilities to maintain

their life. The occupations adopted by the respondents are shown as in table 5 below:

Table 9: Distribution of population by occupation

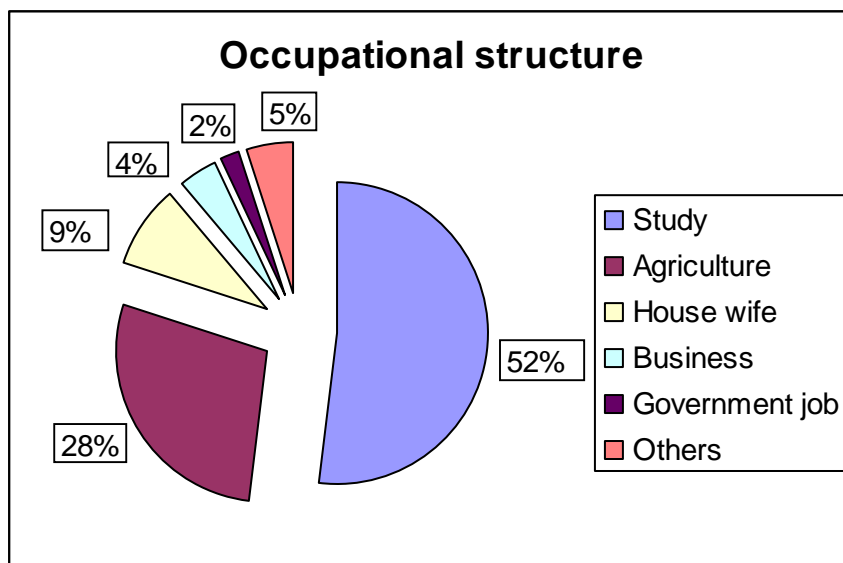
Occupation	No. of population	Percentage
Study	173	52
Agriculture	91	28
House wife	29	9
Business	14	4
Government job	8	2
Others	15	5
Total	330	100

Source: Field survey, 2064.

The table 5 shows to the population distribution by occupation. The table presents different types of occupations like, study, agriculture, house wife, business, government job, and others. The number of student is 173 with 52 percent. Agriculture includes 28 percent, house wife 9 percent, business 4 percent, government job 2 percent and others 5 percent. This table has concluded that the number of student is increasing day by day.

This study has concluded the higher number of population is in the sector of study. Next one is agriculture; it is also broad sector in the study area. The lower number of population is involved in the government job.

Figure 5: Distribution of population by occupation



Source: Field survey, 2064.

5.8 Livestock

Livestock is a major allied occupation of the people in the study area which support to the households income. The aim of the domestication of livestock is to get meat, milk, cash, manure etc with inter linkage farming activity. Those things are obtained from the cow, goat, sheep, buffalo, ox, and etc. Ox is used for plough in the field. Every farmer depends on it. It is the traditional way to product agricultural production in the study area. However, the numbers of livestock kept by the respondents are as shown in table 8.

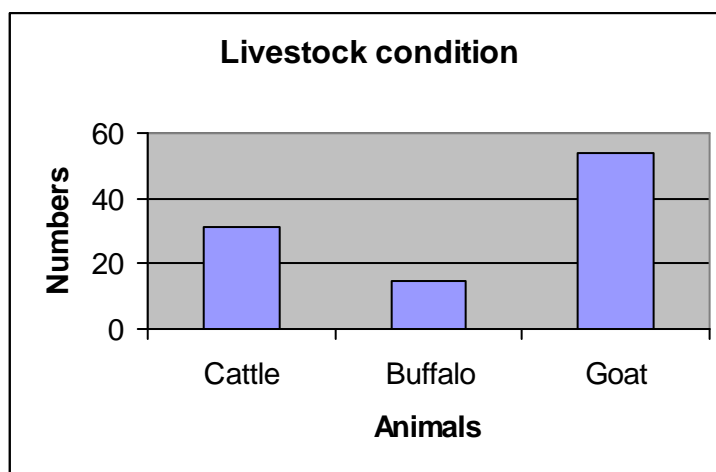
Table 10: Distribution of livestock population

S.N.	Livestock	No. of livestock	%
1	Cattle	114	31
2	Buffalo	55	15
3	Goat	200	54
4	Total	369	100

Source: Field survey, 2064.

Above table shows the numbers of animals that presents different kinds of animals like cattle, buffalo and goat. According to this table, the number of goats is very high and its percentage is 54. Thus, the percentage of cattle is 31 and 15 percent of buffalo in the study area.

Figure 6: Livestock



Source: Field survey, 2064.

CHAPTER - VI

COMMUNITY FOREST MANAGEMENT SYSTEM

6.1 Forest Coverage

Forest has a great importance in the study area in order to maintaining rural livelihood. There are maximum numbers of livestock so that there is high demand of fodder and bedding materials. Better forest products can be obtained from better use, protection and management of community forest. Community forest reduced different types of disasters such as fire, landslide, hunting, killing wild animals, etc.

6.2 People's Involvement in Community Forest Activities

Nowadays, people are interested towards the community forest. CFUGs have been benefited by CF also. They get different types of CF resources and they fulfilled their own basic needs such as fire wood, timber, poles, leaf litters, etc. However, the table 10 shows the methods of community forest management in the study area.

Table 11: Methods of community forest management

Methods of CF management	Involvement of people by sex		Total (%)
	Male (%)	Female (%)	
Nursery preparation	-	-	-
Seedling plantation	-	-	-
Thinning	31 (55%)	25 (45%)	56 (100%)
Cleaning	30 (54%)	26 (46%)	56 (100%)
Taking care of forest	-	-	-

Source: Field Survey, 2064.

Above table shows the different types of forest management activities such as nursery preparation, thinning, cleaning, and taking care of forest. CFUGs have been categorized into two parts such as male and female. There is 55 percent of male and 45 percent of female involved in thinning and 54 percent of male and 46 percent of female involved in cleaning. CFUGs have no participated in other three activities like nursery preparation, seedling plantation and taking care of forest. Nursery preparation and seedling plantation had been completed by District Forest Office (DFO).

6.3 Involvement of CFUGs in CF

Guhele Chhopnarayan Community Forest established in 2051 BS. Then after, CFUGs involved in different years. Number of households involved in CF program is given in Table 11.

Table 12: Number of FUGs household

Year	Household	%
2051	40	71
2052	1	2
2053	2	4
2056	5	9
2058	1	2
2059	4	7
2063	3	5
	56	100

Source: Field Survey, 2064.

Table 11 shows the number of FUGs household by year of Guhele Chhopnarayan CF. Among the sampled household 71 percent of household involved in 2051 BS, 9 percent in 2056 BS and 2 percent in 2052BS etc.

6.4 Distribution of Forest Products

There are different types of forest resources such as fire wood, fodder, timber, leaf litter, etc. some products have not been distributed. Fire wood is the main product that is distributed once a year. Forest products are distributed by the executive committee of CF. Table 12 shows the forest products collection time.

Table 13: Forest products used by FUGs

Forest products	Time	Cost	Distribution
Fire wood	Magh to Falgun	Rs.5/-	8 bhari
Fodder	Restricted	-	-
Timber	"	-	-
Leaf litters	Magh to Falgun	Free	Free
Herbs	Restricted	-	-
Bim	"	-	-
Poles	"	-	-
Fencing poles	"	-	-

Source: Field Survey, 2064.

Above table shows different types of forest products. Mainly, fire wood is the most essential product that is collected between Magh to Falgun of each year. The average fire wood is 8 bhari (392 kg.) per household has

been collected in a year. Entry fee is stated Rs. 5 per household at the fire wood collection period. At that time, leaf litters is also collected without any cost. There is no limitation in the case of leaf litters collection.

CHAPTER-VII

COMMUNITY FOREST AND RURAL LIVELIHOOD

7.1 Sources of Fire Wood

Fire wood is the most important to the rural people. Rural people totally depended on fire wood to cook rice and other things. They use fire wood day by day; there is no alternative way to cook rice in the study area. They collect fire wood by different ways is given below:

Table 14: Sources of fire wood

Sources	Respondents (%)
By cutting trees of own land	6 (11%)
By cutting trees of government forest	–
By cutting trees from community forest	4 (7%)
By using agriculture residues	36 (64%)
Other sources	10 (18%)

Source: Field Survey, 2064.

Table 13 shows different types of sources of fire wood. There is 64 percent respondents who obtain fire wood from using agriculture residues. Then after, 18 percent from other sources, 11 percent from own land and 7 percent from community forest.

7.2 Active Members of CFUGs to Collect Forest Products

CFUGs need forest products to maintain their basic needs. Therefore, to fulfill those basic needs some family members must be active to collect forest products otherwise; they can not fulfill their basic needs such as fire wood, fodder, leaf litters, etc. Table 15 shows in details:

Table 15: Active members of CFUGs to collect forest products

Particulars	Active members
Daughter	7 (13%)
Daughter in law	5 (9%)
Son	10 (18%)
House wife	22 (39%)
Husband	12 (21%)
Total	56 (100%)

Source: Field Survey, 2064.

The table 14 shows the active members who collect forest products from the community forest. According to this table, 39 percent house wife, 21 percent husband, 18 percent son, 13 percent daughter and 9 percent daughter in law. The members of house wife are more than others and the house wives are the most active members to collect community forest products.

7.3 Participation

Participation is the act of taking part in an activity or event. Participation is an essential aspect in social works. It is necessary for the

social development such as drinking water development, road construction, community forest management, bridge construction, etc. Nowadays, many people want to participate in different social works.

The community forest is operated by rural people or CFUGs. Therefore, there are different types of CF activities in Guhele Chhopnarayan CF. CFUGs have participated in various CF activities. However, table 14 presents participation of CFUGs in CF activities.

Table 16: Participation of FUGs in CF activities

Paticulars	Good (100%)	Fair (50-100%)	Less (< 50%)
Protection	9 (16%)	42 (75%)	5 (9%)
Plantation	8 (14%)	41 (73%)	7 (13%)
Meetings	9 (16%)	40 (71%)	7 (13%)
Other communal works	6 (11%)	42 (75%)	8 (14%)
Total	57%	294%	49%

Source: Field Survey, 2064.

Table 15 presents participation of FUGs in CF activities. There are different types of activities such as protection, plantation, meeting and other communal works. As a whole, there is 294 percent in fair (50-100%), 57 percent in good (100%) and 49 percent in less (< 50%). It indicates to well participation of CFUGs in CF activities. On the other hand, it shows to positive thinking towards CF activities.

7.4 Total Fire Wood Products

Guhele Chhopnarayan CF provides the amounts of fire wood one time in a year. CFUGs take fire wood in the period of Magh to Falgun. The total collection of fire wood is in table 16.

Table 17: Account of fire wood

S.N.	Fire wood in bhari	Respondents (%)
1	4	1 (2%)
2	5	4 (7%)
3	6	8 (14%)
4	7	7 (13%)
5	8	27 (48%)
6	9	0 (0%)
7	10	9 (16%)
	Average fire wood 7.63	

Source: Field Survey, 2064.

Above table shows that the amount of fire wood is collected by CFUGs of Guhele Chhopnarayan CF. in which 8 bhari fire wood has been collected by 48 percent households, 10 bhari by 16 percent, and 4, 5, 7, 6 bhari collected by 2, 7, 13, and 14 percent households respectively. The average amount of collection fire wood is 7.63 bhari per household in the study area.

7.5 Livestock Feeding

Domestic animal is the most essential for the rural people. Domestic animal kept by rural people for the fulfillment of their basic needs. Some animals are for meat, milk, while others for carrying load, ploughing, etc. Those animals they need enough fodder, hay, grain, etc. Therefore, table 17 shows such types of products that feeding in a day (in bhari and in kg.).

Table 18: Products that feeding in a day (in bhari and in kg.)

Particulars	(in bhari)	(in kg.)	(%)
Fodder, hay	205	9205	95
Grain		81	1
Others		384	4
Total	205	9670	100

Source: Field Survey, 2064.

Above table shows the animal feeding among sampled respondents. They provide fodder, hay, grain and other products to their animals. The main feeding is fodder and hay in the study area. Sampled respondents usually manage 205 bhari fodder, hay and totally 9670 kg. feeding materials in a day.

7.6 Distances between CF and Residence of CFUGs

Distance is one of the factors to use, protect, manage of CF. Where the shortest distance between Cf and people residence there is proper use and manage of CF. Table 18 shows the distance of CF from residence of CFUGs.

Table 19: Distance of CF from residence of CFUGs

Distance (in meters)	Households (%)
Below 500	95 (29%)
500 - 1000	110 (33%)
1000 - 1500	123 (37%)
Above 1500	2 (1%)
Total	330 (100%)

Source: Field Survey, 2064.

Above table shows that the distance between CF and the residence of CFUGs. 37 percent CFUGs have settled within 1000-1500 meter distance. And 33 percent, 29 percent, and 1 percent CFUGs have found within 500-1000m., below 500, and above 1500m.respectively.

The large numbers of CFUGs have found in the range of 100-1500 meter. After that, the lower number of CFUGs have found above 1500 meter.

Distance is one of the essential elements. It plays a vital role for the better use, management, and protection of CF. Where the short distance of CFUGs they feel their own responsibility about CF and they can visit so easily to the CF. On the other hand, they get chance to protect of CF from other persons such as hunter, wood cutter, etc. and they can convey their message to other people.

CHAPTER-VIII

CONCLUSION AND RECOMMENDATION

8.1 Conclusion

Community forest is a forest which handed over to the local people by government for better management, protection and utilization. The community forestry concept was emerged during 1970s in Nepal. The aim of community forest is to enhance forest resources and sustainable resource utilization.

Community forest is one of the natural resources. It provides different types of forest resources to rural people to maintain their livelihood. They are fodder, timber, fire wood, poles, fencing poles, bedding materials, etc. Rural people need those forest resources for fulfillment their basic needs in their everyday life.

Guhele Chhopnarayan CF is one of the CFs in Gupteshwor VDC Bhojpur. It covered by 4.43 hectare area. It established in the period of 2051 BS. Mainly there are 112 households involved in this CF and the CFUGs of this CF have positively participated in these CF activities.

The Guhele Chhopnarayan community forest is situated in the ward no. 8 of gupteshwor VDC, Bhojpur. This CF has included to the ward no. 4,5,6,8 and 9 in the case of forest management, protection and utilization. There are mainly Newar, Rai, Chhetri, and Brahamin as the major castes in

the study area. They are basically depended on agriculture. Their economic activities are subsistence farming with livestock, business, and government job and so on.

According to field survey, the average fire wood is 8 bhari per household in a year. One bhari fire wood takes 49 kg. The total output of fire wood is 427 bhari or 20923 kg based on sampled respondents. Actually, there are totally 112 households and per household takes 8 bhari fire wood in a year. In this way, this study concludes the total output of fire wood is 896 bhari and 43904 kg in a year.

Guhele Chhopnarayan Community Forest comprises to the CFUGs of ward no. 4,5,6,8 and 9. They are not fully depended on this CF for fuel wood, fodder, timber, leaf litters etc. They are totally depended on private forest, agricultural residues for the fuel wood, timber, leaf litters and so on.

There is restricted for cutting fire wood, timber, collecting leaf litters and other products of Guhele Chhopnarayan CF. Users can not take those forest products without permission of CFUGC of Guhele Chhopnarayan CF. Such kinds of rules and regulations are operated by community forest user group committee (CFUGC).

CFUGs have positive thinking towards CF and its various aspects such as management, protection and utilization. They are more conscious towards CF utilization. The aim of CFUGC is to make the forest greenery, dense populated in the forest coverage area in the sense of natural beauty and sustainable forest development. If they do so, CFUGs will obtain too much

CF resources like fire wood, timber, poles, herbs, and other important materials after a long time.

8.2 Recommendation

From the present study, the following recommendations can be drawn so as to encourage the sustainable development of community forest and the wide relationship between community forest users group of the study area.

-) Fuel wood is the major source of energy in the study area. In order to reduce the dependency of fire wood from forest, an alternative energy source such as micro hydropower, bio-gas, solar energy or wind energy should be introduced by the connected agencies.
-) Most of the villagers are poor. Therefore, they must improve their income by encouraging them to take of medicinal plants. As a number of medicinal plants exist in the area, it may not be a difficult proposition.
-) People should be educated to maintain the importance of biodiversity and to make the environment eco-friendly; NGOs may come forward to help in the different activities.
-) In order to raise the income through agricultural production, the use of improved seeds and scientific method of farming should be encouraged to the farmers by the concerned authorities.

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Annex-2

PHOTOGRAPHS

Plate 1: Interviewing with female respondent



Source: Field Survey, 2007.

Plate 2: Interviewing with male respondent



Source: Field Survey, 2007.

Plate 3: Interviewing with male respondent



Source: Field Survey, 2007.

Plate 4: Discussion on the meeting of CFUGs



Source: Field Survey, 2007.

Plate 5: Discussion on the meeting of CFUGs



Source: Field Survey, 2007.

Plate 6: View of Guhele Chhopnarayan CF



Source: Field Survey, 2007.

Plate 7: Inner
part of Guhele
Chhopnarayan CF



Source: Field Survey, 2007.