

**SOCIO- ECONOMIC IMPACT OF COMMUNITY  
FORESTRY ON INCOME DISTRIBUTION: A  
CASE STUDY OF GHAILAGHARI  
COMMUNITY FOREST USER  
GROUP OF BHARATPUR-23,  
CHITWAN**

**A Thesis**

**Submitted to the Department of  
Economics of Birendra Multiple Campus,  
Faculty of Humanities and Social Science of Tribhuvan  
University, In Partial Fulfillment of the Requirements for  
the Degree of MASTER OF ARTS  
in  
ECONOMICS**

**By**

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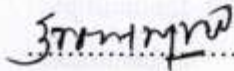
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**July, 2022**

## DECLARATION

I, SUMAN GIRI hereby declare that the thesis entitled "**Socio-Economic Impact of Community Forestry on Income Distribution: A Case Study of Ghailaghari Community Forest User Group, Bharatpur - 23 Chitwan**" submitted to the Department of Economic Birendra Multiple Campus, Bharatpur Chitwan Nepal is entirely my original work prepared under the guidance of my supervisor. I have prepared this thesis by getting all ideas and information borrowed from different sources. The results of this thesis have not been presented or submitted anywhere else for the award of any degree or for any other purpose. I assure that no part of this content of this thesis has been published in any form before.

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### LETTER OF RECOMMENDATION

This thesis entitled "Socio- Economic Impact of Community Forestry on Income Distribution: A Case Study of Ghailaghari Community Forest User Group Bharatpur -23 Chitwan" Has been prepared by Mr. SUMAN GIRI under my supervision and guidance. I hereby, recommend it in partial fulfillment of the requirement for the degree of MASTER of ARTS in ECONOMICS for final examination.

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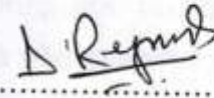
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### APPROVAL SHEET

We certify that the thesis entitled "Socio- Economic Impact of Community Forestry on Income Distribution: A Case Study of Ghailaghari Community Forest User Group Bharatpur -23 Chitwan" submitted by Mr. SUMAN GIRI to Department of Economics, Birendra Multiple Campus, Bharatpur, Faculty of Humanities and Social Sciences, Tribhuvan University, in partial fulfillment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS has been found satisfactory in the scope and quality. Therefore, we accept this thesis as a part of the said degree.

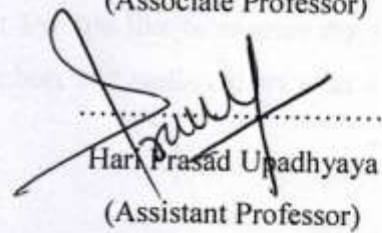
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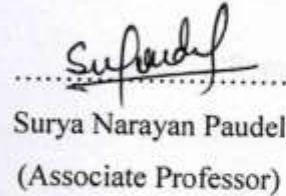
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Suman Giri

## ABSTRACT

The Thesis entitled “**Socio- Economic Impact of Community Forestry on Income Distribution: A Case Study of Ghailaghari Community Forest User Group Bharatpur -23 Chitwan**” has been conducted to examine the impact the community forest in income level of its users. Community Forest is an evolving branch of forestry whereby local community plays a significant role in forest management and land use decision making. it involves the participation and collaboration of various stakeholder including community, government and non-governmental organization.

Descriptive research design was used in this research. Data was collected using simple random sampling from 140 household using questionnaire methods. Data was entered and analyzed in to SPSS-20. Different descriptive statistical tools like frequency table, pie diagram and bar diagram were used for data presentation.

In this study, most of the household’s member belongs to economically active group and in literate group. Majority of the household (57.15 percent) head were male and their age range was 40-50 years. They are from nuclear family. Most of the household economic status was medium level. The higher and middle-income group, having pakki and semi pakki house with their land holdings use LP gas/firewood as a major source of energy consumptions. Most of all household were involved in agriculture (64.28 percent). Also, 28.57 percent mention that poor households have not received adequate opportunity for training package offered in community, 12.85 percent mention that all the peoples are not including all group peoples in decision making process, do not been given sufficient access in forest resources. Most of the households are suffering from wild animals.

However, there are many challenges of community forestry, it is a main a source of livelihoods to all of the community forest user group.

**Keywords:** *Community Forest, Resources, User group, Wild life, Livelihood.*

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## LIST OF ABBREVIATIONS

BMC	Bharatpur Municipality
CBS	central Bureau of Statistics
CF	Community forestry
CFM	Community forest management
CFP	Community Forest program
CNP	Chitwan National park
DOF	Department of forest
FAO	Food and Agriculture organization
FUCS	Forest User Groups
GCF	Ghailaghari community forest
INGOs	International non-governmental organizations
MOF	Ministry of forest
NGOs	Non-governmental organization
NRB	Nepal Rastra Bank

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the study

Community forest is an evolving branch of forestry where by local community plays a significant role in forest management and land use decision making themselves in facilitating support of government as well as change events. it involves the participation and collaboration of various stakeholder including community, government and non-governmental organization (NGOS). It gained prominence in the mid-1970s and example of community forestry can now be seen in many countries including Nepal, Indonesia, Korea, Brazil, India and North America (Husgafvel, 2011).

The community forestry is a participatory forest management system in Nepal, that was started in the late 1970s(Bartlett, 1992). Defined community forestry as the control, protection, and management of forest resources by rural communities for whom trees and forests as an integral part of their farming systems. The community forest Act 1993 gives local people significant control in the management and harvest of forest resources (Giri, 2013). Because of this progressive act, community forest hand over process has speeded up rapidly during this nine years period. (Bhatt, 2008) reported that about 850, 000 hectares forest areas have been handed over to eleven thousand forest user group.

“Socio-economics” is sometimes used as an umbrella term for area of inquiry. The term “socio- economics may refer broadly to the “use of economics in the study of society” (Rattanasripanya, 2011). More narrowly, contemporary practice considers behavioral interaction of individuals and group through social capital and social “markets (not excluding, for example sorting by marriage) and the formation of social norms. In the relation of economics to social values.

A distinct supplemental usage describes social economics as a “discipline studying the reciprocal relationship between economic science on the one hand and social philosophy, ethics and human dignity on the other hand “towards social

reconstruction and improvement and improvement or as also are emphasizing multidisciplinary methods from such field as sociology, history and political science. In criticizing mainstream economics for its alleged faulty philosophical premises (for example the pursuit of self-interest) and neglect of dysfunctional economics relationship, such advocate tends to classify social economics as heterodox.

There are around 12,725 forest user Groups (FUGS) formed in Nepal during the period of Nepal with nearly 1. 2 million household members, which account approximately 20 percent of the country of the country's population who have taken over responsibility to manage 850,000 hectors forest 16percent of the total forest land of the country (Shrestha, Shrestha, & Bawa, 2018). At the moment in Nepal, average of two FUGS is being formed every day. Community forest has contributed mainly to the improvement of forest condition and people's livelihood in the three ways namely'

- i. Capital formation in rural communities,
- ii. Policy reforms and governance reform of various organization and agencies, and
- iii. Contribution in the process of community empowerment and social change.

Capital forestry has become a means to increase natural, social, human, financial and to some extent the physical capital of community forest users.

Community forests handed-over to community are natural capital. Evidences show that there are positive changes in both forest condition and availability of forest products, with a concurrent reduction in the time spent for collecting forest products. Thousands of FUGS have planted and protected denuded hills, carried out forest management and silvicultural operation, utilized and marketed various forest product for their livelihood (Sapkota, 2019).

Since the inception of the community forestry program a number of training workshops and exposure visits have been conducted for a number of organization and individuals at community level, government and non-government organization level that has increased knowledge and skill related to forest silviculture, community

development, organizational management and leadership development, all of which are basically human capital (Sapkota, 2019).

The group fund generated from the sale of forest products, levies and outside grants are the financial capital created through community forestry. It is reported that there is a balance of about of 100 million rupees among 12, 000 FUGS in the country (Bhatta, Karna, Dev, & Springate-Baginski, 2013). This amount is almost equivalent to government's annual forestry development budget allocated to all district. There are numerous examples where many of these FUGs have established low interest credit scheme as well as grants to poorest household members from the FUG fund.

Community forestry has become a vehicle in bringing change in social processes empowering poor and disadvantaged members of the community. In some FUGs awareness is raised among disadvantaged and marginalized members of the group in matter related to inequality, social injustice and their exclusion from social and political processes including the benefit from mainstream development. It is reported that in some cases community forestry has made significant contribution in increasing the participation of some marginalized section of the community. In some FUGs, marginalized user (including women's) representation has increased in the user's committees and many of them have begun to develop an increased voice in meeting and assemblies. They have also begun to demand services from government, other services delivery agencies and powerful members of FUGs (Adhikari & Di Falco, 2009).

## **1.2 Statement of the problem**

The current population of Nepal in 2022 is 30, 225, 582 a 1. 86percent increase from (Dhakal, Creedy, Gamble, Newnham, & McInnes, 2022). About 66 percent of the total population pressure in agriculture (FAO) directly engaged in agriculture. Farming is subsistent in nature and crop is mostly integrated with livestock; remittance has contributed 23 percent (NRB 2020) to our GDP beside this there is no other opportunity for employment. So, deforestation, overgrazing and cultivation land have been done for growing population. Nepal has loosing forest at alarming rate; deforestation is one of the major problems in Nepal. Deforestation results in the

annual loss of 13 million ha of forest but only the government efforts are not sufficient to solve these problems (FAO, 2019).

Ghailaghari community forest (GCF) is located in BMC-23 in Chitwan district of Central Nepal. It is approximately in between latitude 27°03'05.3" North latitude and 84°18'50.7" to 84°19'45.6" East longitude. It was established in 1995 with an area of 156.4 ha. Topography of the study area is more or less flat with an elevation of 150m above mean sea level. *Ghailaghari* community forest lies inside the buffer zone area. People residing around GCF are illiterate, socially and economically backward. People of GCF group use to fulfill their basic needs from the forest such as; fodder for livestock, manure for harvesting land, timber for the construction of house.

The human-wildlife conflict refers to the interaction between wild animals and people and the resultant negative impact on people or the resources or wild animal or their habitat. The 5th world park congress in Durban pointed out that human-wildlife conflict occurs when the needs and behavior of wildlife. As human population expand; the demand for resources was led to conflict between wildlife and human competing for the same resources. GCF and Chitwan National Park is only separated by Rapti River, both are success in conserving some of the endangered species but often at the price of recurring conflicts between GCF and CNP. Conflict is now more intense and of greater magnitude. These conflicts are often compounded by lack of education, unemployment, lack of community development and GCF related employment opportunities (Abate & Kronk, 2013).

Socially and economically backward people reside around our community forest. Every day they go to forest for collecting grass, food and timber and some people generate income by picking fiddlehead (*Niuro*) this flow of people disturbs the habitat of wild animal. Some GFCUs hunted wild boar and chital. One horn rhino was hunted frequently some years ago. However, as Nepal government has established strict rule against animal hunting it was consistently low. On the other hand, during the time of elephant breeding in search of female elephant male enters to the community and destroyed houses of people. The breeding season of elephant is during the month of *Kartik* and *Manghir* that is also the time of collecting ripen paddy elephant destroyed rice of people. Similarly, during the time of harvesting maize and wheat chital and wild boar destroyed the plantation.

The main focus of the present study is the socio-economic impact of Ghailaghari community forest of BMC-23. The study also attempts to find out its situation, management system, to analyze the benefits derived by the user group, and find out the problem of community forestry and utilization process conflicts between the forest policy and the user groups and their nature.

The community forestry (CF) programmed has got the highest priority in Nepalese forestry sector. Forest is the common property. Forest is the basis of the lives of the rural people. Some of the basic needs of rural people are fulfilled from forest. forest is recognized as an integral part of national economies, providing a wide range of production inputs, environmental goods, food, fuel, medicine, household equipment, building material and raw materials for industrial processing. Moreover, it has environmental and ecological importance too. Such an important natural resources are in critical situation. The rules and laws made by government is not possible to preserve forest. So, it is only possible by the co-operation between people and government.

Community based forest management in Nepal has been widely acclaimed as the most successful approach for participatory forest management and its governance. So, for about 2, 831, 707 hectors of forest in Nepal have been managed under the regime of community –based forest management. (Grassroots journal of natural resources). Community forest program (CFP) has positive result in the field of income generation. Some of them are poverty reduction, local development, forest preservation, environmental and ecological balancing and so on. (Bixler, Jedd, & Wyborn, 2018)

Many economists, ecologist, forestry, zoologist had already researched regarding the socio-economic, conflict between human and wildlife and in community forest. There are many new topics in which researched hasn't done yet. But there are many challenges for the effective implementation of this programmed, for me as I am the resident of Ghailaghari buffer zone community forest this was be best selective topics for my research. The area of Ghailaghari community forest is 156 ha.

Nowadays there is a beautiful lake called *GHAILA TAL* lies in *Ghailaghari* community forest. Many popular resorts of Nepal *Kasara* resort, jungle villa, branch



of Annapurna five-star hotel of Kathmandu (Jagatpur *kasara* resort and lodge), and resort of Radisson hotel which are established around GCF. Internal tourist and foreign tourist come to visit our community forest. Many people are employed in hotel which help to generate income among the people because of these hotels local market is also expanding. Every year during the time of *Chaitay Dashain* National Park open for *Bikram Baba mela* for 15 days which has religious faith among the people also helps to generate income among the local people. This research therefore, is expected to contribute a better understanding in the linkage among community forestry, local people participation in forest management and resource mobilization. Impact of community forestry for the enhancement of economic condition of user group and its effect on rural development activities through the study of *Ghailaghari* forest user group situated in BMC-23 of Chitwan district.

### **1.3 Objective of the study**

The study is concern with the socio-economic impacts of the community forest user group nearby Chitwan National Park in Chitwan. The study is mainly focused on the following objectives:

- i. To find the socioeconomic status of community forest user
- ii. To study the benefits derived by the user group from the community forestry
- iii. To find the problems and utilization of community forest resources in the study area.

### **1.4 Limitation of the study**

The study is carried out only in BMC-23 the generalization. The present study focuses only one forest user group of GCF. The research is bounded by a limited time period and cost. Therefore, the conclusion and result made by the present study may not be same and equally applicable for all other community forest user groups. But the recommendation given here may help for further study.

1. The study covers only few variables and limited items in term of deeper analysis. Hence only selected variable i. e (firewood, timber, livestock, fodder) has taken into account.

2. The data analysis is based on simple statistical technique. The sophisticated statistical tools and technique have not been adopted for the generalization of the study. Hence the finding of the study may not be generally conclusive.

## **CHAPTER-II**

### **REVIEW OF THE LITERATURE**

The study on community forestry is not new. Many Governments office, wild lifer, NGOs, INGOs, researcher and higher levels students have undertaken the study of community forestry in Nepal. At present many analytical studies on community forestry have been undertaken in different parts of the world.

Much have been written about the formation of forest user group (FUG) and handing over the forest. A number of studies on community forest published in various books, documents and journal of forestry and community forestry programmed. These available researches which were helpful to identify the objective of the study were reviewed. They are as follows and are addressed by the following sub heading.

#### **2.1 Origin and management of community forest in Nepal**

Prior to the community forest program, the Government of Nepal had control of local forests during the mid-1950s. The community forestry project came into fruition during the late 1970s, when there was a great concern for environmental sustainability and the degrading Himalayan slopes (Veer, 2010). The continuing growing population put a strain on the resources and the government was seeking methods in order to protect their forests whilst achieving better livelihood of Nepali people. The governmental came into the conclusion that they needed active participation of local people in forest management in order to further reduce the environmental degradation in the Himalayan slopes.(Fraser, Dougill, Mabee, Reed, & McAlpine, 2006)

The first institutional shift began in 1978 when the forest regulation of panchayat forest and panchayat –protected forest rules allowed local governments the right to oversee and manage selected forest areas. An even greater shift began in the early 1990s under the forest act 1993.This act enacted even greater government decentralization and allowed local communities to have direct access and management over the forests that they depend for resources. However, that is not to say that the government has not forfeited their ownership of the forests. The state still maintains ownership while communities have the rights to utilize and manage the

forests (Balooni & Inoue, 2007). The forest Act 1993 and forest regulation 1995 guaranteed two rights: 1) right to self-governance and 2) right to forest management and utilization (Kimengsi & Bhusal, 2022).

Nepal's forest sector policy was first declared in the sixth five-year plan (1981), which emphasized community participation in the management conservation and utilization of forest resources (Wagley & Ojha, 2002). The government prepared master plan for forestry sector in 1987. Primarily based on these concepts new community forestry policy was derived after the restoration of democracy in 1990.

Community forestry management (CFM) originates in Nepal due to the progressive degradation of hill forest caused by institutional failure. During 1951-1961, forest was nationalized and controlled by the department of forest (DOF) (Wagley & Ojha, 2002). But they are unable to manage it which creates an open access situation and local users lacked incentives to regulate forest use. It leads to unregulated extraction by creating conflicts between villagers and DOF staff. After this, land registration processes started in Nepal, which lead to encroachment and forest degradation by threatening the sustainability of livelihoods. CFM has been promoted as an important step in common property resource management in Nepal. To mitigate the growing deforestation and deterioration of the forest, government of Nepal made a policy based on the 1976 National forestry plan to involve local communities in forest management.

The new act "forest Act 1993" classified the nationalized forest into five different categories, they are; government managed forest, community forest, religious forest, protected forest and there was also provision of private forest (Wagley & Ojha, 2002). Community forestry is not concerned with the protection of forest for the own sake but with providing sustainable source of forest product of the people of Nepal (Anup, 2016).

## **2.2 Community forestry and poverty reduction**

In a developing country like Nepal, the role that forestry has played or can play in addressing poverty reduction is an important issue. The critical role of community forestry in particular and forestry in general in fostering

social and economic development in Nepal's rural areas has already drawn some attention (Chhetri & Jackson, 1995). Malla proposed about a decade ago "as long as community forestry in Nepal is confined to the narrow objectives of meeting subsistence needs for fodder, firewood and construction timber and excludes the domestic market, the potential contribution of community forestry to the socio-economic development process was not be fully realized" (Malla, 2001). Similarly, Chhetri and Jackson based on case in Sindhupalchok and Kabrepalanchok, argued that employment opportunities could be created through community forestry in the villages that "may have implication on the social and demographic processes too"(Chhetri & Jackson, 1995).

Some researchers have used the sustainable Rural Livelihood approach in discussing the issues of livelihood and poverty among forest user groups in Nepal as well. This approach recognizes five forms of capital as crucial in talking about whether and how people's livelihood have been and can be improved. Viz; natural capital physical capital, financial capital, human capital and social capital (Shepherd & Gill, 1999). Those who use this model argue that poor people lack option for sustainable livelihood of capital assets" (Shepherd & Gill, 1999).

Policies and strategies for the reduction of poverty are laid out in various documents and legislation pertaining to a number sectors at present. In the past, particularly during the 1970s, the focus was on integrated rural development, while in the 1980s, the focus shifted to meeting the basic needs. In the 1990s, Nepal moved along with the rest of the world in emphasizing 'sustainable development' and today," poverty reduction "is considered to be the most critical and high priority development objective.

## **CHAPTER – III**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

This study is based on descriptive research design. In this study both qualitative (to get the perception about their view towards the benefits of community forest) and quantitative research was used. Socio-economic impact of community forestry and local development was be briefly described on the basic of the attitude of the respondents and data of different activities available in the study area. The basic objectives of the study were to identify the different activities performed by the user groups for the betterment of poor households, to examine the local development activities and to find out the problems regarding the community forestry management. The methodology consists of source of data, data collection technique and method of data analysis.

#### **3.2 Nature and source of Data**

This study was being based on both primary and secondary source of data, primary data was collected from the study area. During the field work primary data on key information was collect from the sample respondents. Secondary data are those data which already exist and may be used for investigation. The secondary data include records are reports on different aspects of study (report of community forest). The reports and records are obtained from different source and office i.e local forest office, District Forest office census survey etc. Different maps, diagrams, tables were also included in this study. Similarly, other secondary source of information was; articles, books and dissertation on related topics.

#### **3.3 Study Area and sampling**

Primary data refers to the information which was be originated directly as a result of the particular under investigation. Primary data was mainly collected through structured questionnaires. The total numbers of forest user household are found out to

be in *Ghailaghar* community forestry user group was 994, in this total size. by taking 7percent margin of error

$$\text{Sample size} = \frac{N}{1+Ne^2} = \frac{994}{1+994*0.07*0.07} = 135.05 \approx 140.$$

Total population of Ghailaghari community forest user group is 994 out of total household 140 households have been taken as sample size, which consists of households. Each sampling unit was selected by simple random sampling without replacement. Necessary information and data were collected from the study area. So, randomly 140 household were used for this research.

### **3.4 Technique of Data collection**

Different data collection techniques were be employed to obtain different types of quantitative, qualitative data and empirical information. Some techniques used for data collection was describe below.

#### **3.4.1 Questionnaire**

Questionnaire sheet was prepared and administrated to the local people in order to collect quantitative and qualitative data. Structured questionnaire was be used to get quantitative data in the field of personal identification, population composition, educational status, land holding patterns, forest utilization as well as poverty reduction and forest development.

#### **3.4.2 Interview**

Interview method was be used to collect empirical information relates to this study. Empirical information obtains from the interview method includes causes of forest depletion, crisis of local people response of the local people to the community forestry, impact of deforestation in the native subsistence system and traditional system of forestry practice.

### **3.4.3 Observation**

Participant observation is a very useful method for examining local development activities and patterns of daily resource use. It was used to verify information that was gathered by means of methodologies. Informal interaction was carried out with local people during the study in villages.

### **3.4.5 Selection of key information**

A few pieces of information were selected to obtain in-depth information in the field of history of settlement, stability and change in the attitude of people towards forest conservations etc. The key informants are village elderly people, local political leaders, local elites, secretary and chairman of Ghailaghari buffer zone community forest committee.

### **3.4.6 Field diary**

The researcher used a hand diary to maintain the record of day to day for necessary information observed during field survey and to collect the information about the forest. It was meant to note some supporting information which was not covered by the survey questionnaire. Details of important incidents, events and discussions were recorded in the hand diary.

### **3.4.7 Method of Data analysis**

The collected data was classified, tabulated and analyzed in terms of simple statistical tools like frequency, percentage and mean. Descriptive method was taken into consideration to obtain the basic purpose of the study.

The overall weight of utilized fodder and manure was taken in '*Bhari*' then it was given an expected value for each *Bhari* for final analysis in terms of monetary term. Quantity of firewood was taken in kilogram and quantity of timber was taken in CFT and converted into monetary term.

Both quantitative and qualitative data analysis was used for the analysis of the collected data. For the analysis of the quantitative data percentage and mean were used. Similarly, for qualitative data was analyzed using descriptive mean.

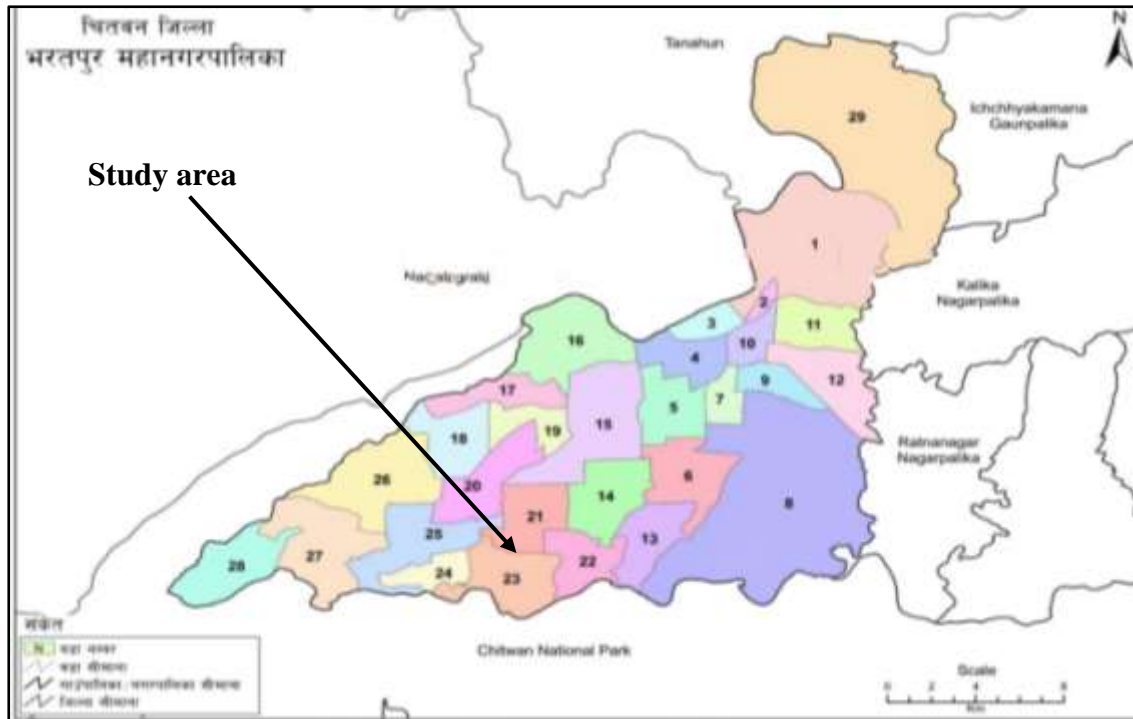


## CHAPTER - IV

### RESULTS AND ANALYSIS

The data collected through different techniques as discussed above needed editing and tabulation before their analysis. In the first stage information was carefully check for completeness, missing values and then entered in to SPSS-20. Results were presented and analysis of data was done for meeting the objectives stated earlier in systematic manner

Ghailaghari community forest (GCF) is located in BMC-23 in Chitwan district of Central Nepal. It is approximately in between latitude 27°03'05.3" North latitude and 84°18'50. 7" to 84°19'45. 6" east longitude. It was established in 1995 with an area of 156. 4 ha. Topography of the study area is more or less flat with an elevation of 150m above mean sea level. *Ghailaghari* community forest lies inside the buffer zone area. People residing around GCF are illiterate, socially and economically backward. People of GCF group user fulfill their basic needs from the forest such as; fodder for livestock, manure for harvesting land, timber for the construction of house. The human-wildlife conflict refers to the interaction between wild animals and people and the resultant negative impact on people or the resources or wild animal or their habitat.



#### 4.1 Socio demographic Features of Ghailaghari Community Forest user group

The total population of this areas is about 4697 among them 2393 were male and 2304 were female. Majority of people were involved in agriculture and their education is basic education. It is imperative to know what kind of socio-economic features the respondents generally have, to know their basic reality. Following were the various features of the respondents that were studied under this research. In this study age, sex structure, education, caste and ethnicity are taken as socioeconomic variables.

##### 4.1.1 Age and Sex Structure of Household

Age and sex structure of population of particular region is key determinants for development of any community or country. This shows the distribution of population of study area according to age and sex.

**Table 4.1 Age and sex composition of Household Population****(n=466)**

<b>Age</b>	<b>Sex</b>		<b>Total</b>	<b>Percentage</b>
	<b>Male</b>	<b>Female</b>		
≤5	22	22	44	9.86
5-15	69	56	125	28.02
16-59	114	112	226	50.67
≥60+	33	38	71	15.91
<b>Total</b>	<b>238</b>	<b>228</b>	<b>466</b>	<b>100</b>

*(Source: Field Survey, 2022)*

According to the table, the half proportion of population in the study area is in the age group of 16-59 was 50.67 percent. The most 50.67 percent of people are economically active people. Similarly, 28.02 percent of people are in age group of 5-15 which is school age group. Only 9.86 percent of total population are in age group of below 5 and 15.91 percent of population are in age group of 60 or above which is known as economically inactive age group.

#### **4.1.2 Education Status of Households**

Education status is a vital part of a community gateway account so a people can see and track their education throughout their life time where appropriate. Education status of any household is a good indicator to assess the status of any household. Many of the people are literature in the surveyed area and males are found to be literature more than the women. The education level of the surveyed households is shown below:

**Table 4.2 Education Status of Household Population on the basis of Sex**

Particular	Male	Female	Total	(n=466)
				Percentage
Illiterate	20	23	43	9.22
Basic Education	97	89	186	39.83
Secondary Education	69	58	127	27.12
High Education	52	58	110	23.73
Total	238	228	466	100

*(Source: Field Survey, 2022)*

Above table shows the educational status of the study area 9.22 percent of the total population were found illiterate. Educated populations with Literate were found 90.68 percent which is excellent percentage of the education status of household population. Out of total sample population, Basic education holders were found 39.83 percent. Secondary education holder was found 27.12 percent. Similarly, High education holder population found 23.73 percent. So, more than 50 percent population of the study area has secondary or high education level.

#### **4.1.3 Socio-demographic characteristics of Community Forest users**

Socio-demographic indicators are important components of understanding the community users resource management, livelihood impacts and the opportunities and constraints faced by the CFUGs. It is helpful to understand the changing relationship between local people and community forest in the study area as well as users. The ethnic and caste composition reveals the socio-cultural mirror of the study area, where 140 CFUGs household have been taken as a sample. The following table has presented the membership by their socio-demographic variables.

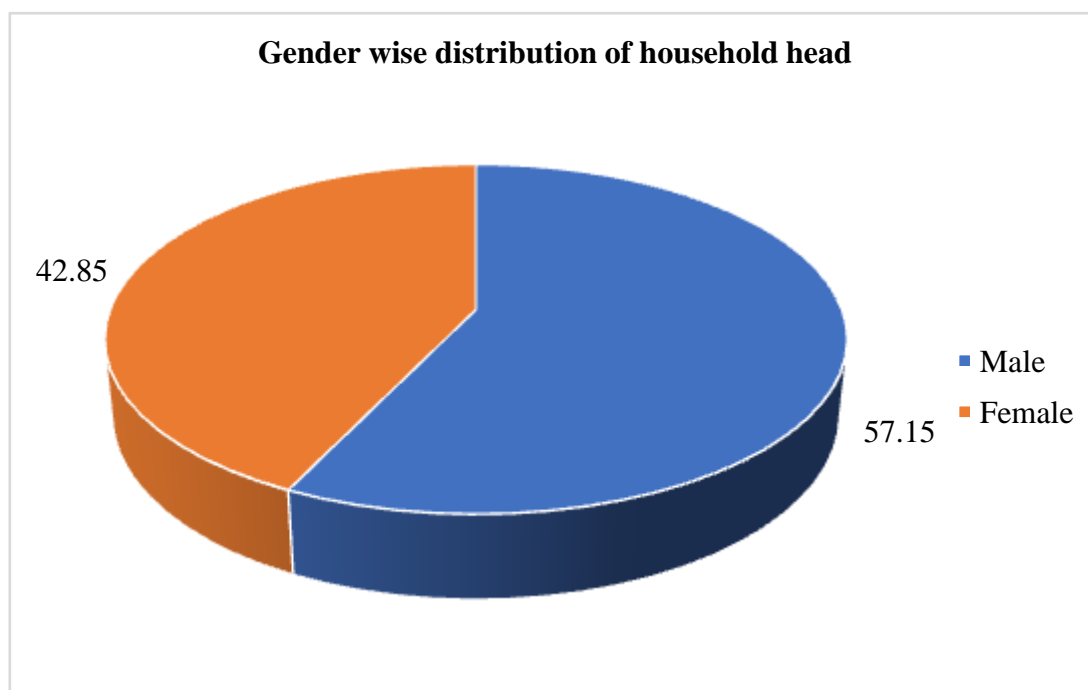
**Table 4.3 Gender wise distribution of household head**

(n=140)		
<b>Gender</b>	<b>Number of households</b>	<b>Percentage</b>
Male	80	57.15
Female	60	42.85

(Source: Field Survey, 2022)

Above table 4.3 and following pie diagram showed the gender wise distribution of household head of community forest users. This revealed that in the majority of the household (57.15 percent) had male as a household head were as in 42.85 percent household had female household head.

**Figure 4.1 Gender wise distributions of household head**



(Source: Field Survey, 2022)

#### 4.1.4 Family size of household

Family size refers to the number of persons living in the same housing unit. Economic family refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law union, adoption or a foster relationship.

**Table 4.4 Family size of household**

	(n=140)	
<b>Family size</b>	<b>No.</b>	<b>Percentage</b>
1-3 members	71	50.82
4-5 members	62	44.26
6 and above	7	4.92
<b>Total</b>	<b>140</b>	<b>100</b>
<b>Total Number of family members</b>	<b>466</b>	<b>-</b>
<b>Average family size</b>	<b>3.32</b>	<b>-</b>

*(Source: Field Survey, 2022)*

Family size of sample household ranges from one to 8 members. About one-half (50.82 percent) belong to small family (up-to 3 members). Similarly, more than two fifth (44.26 percent) belong 4-5 members. Very small proportion (4.9 percent) have more than 6 family members. There are 466 family members in the sample household of 140, that renders the average number of family members in household to be 3.32, which is less than the national average of 4.32 members (CBS 2021).

#### 4.1.5 Family type

More than one half of the population of sample household belongs to nuclear family whereas rest of the sample population reported to be living on joint family system which is given as.

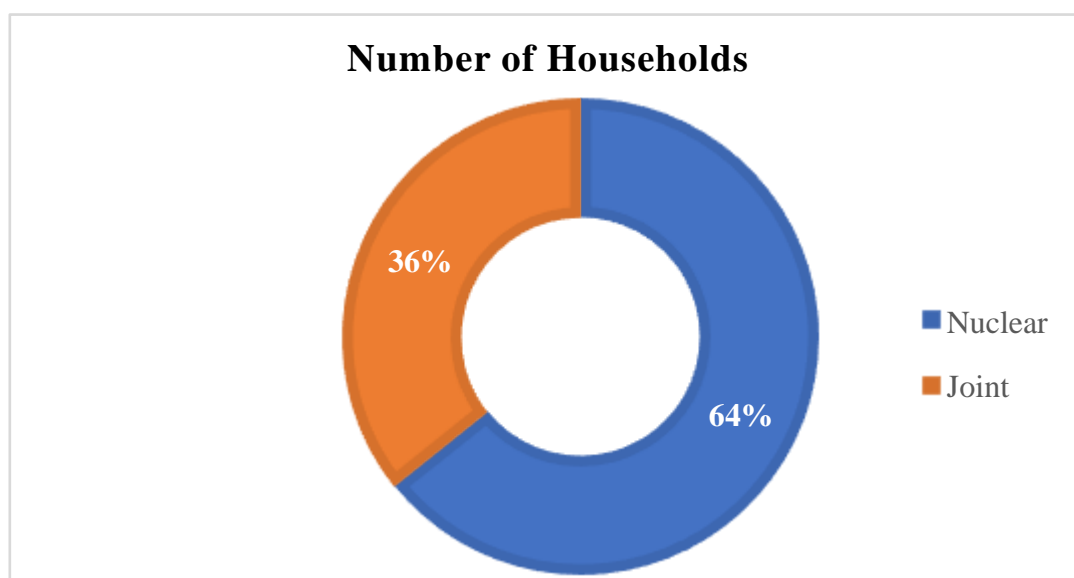
**Table 4.5 Type of family of household**

Type of family	Number of households	Percentage
Nuclear	90	64.28
Joint	50	35.71

*(Source: Field Survey, 2022)*

Above table 4.5 and following doughnut diagram showed the type of family of community forest users. This revealed that in the majority of the household 64.28 percent were from nuclear family while 35.71 percent were from joint family.

**Figure 4.2 Type of family of household**



*(Source: Field Survey, 2022)*

#### **4.1.6 Cast and Ethnicity of the Households**

Cast and ethnicity is one of the major elements of the social information. To study the information of the cast and ethnicity of the study area the household are found different casts.

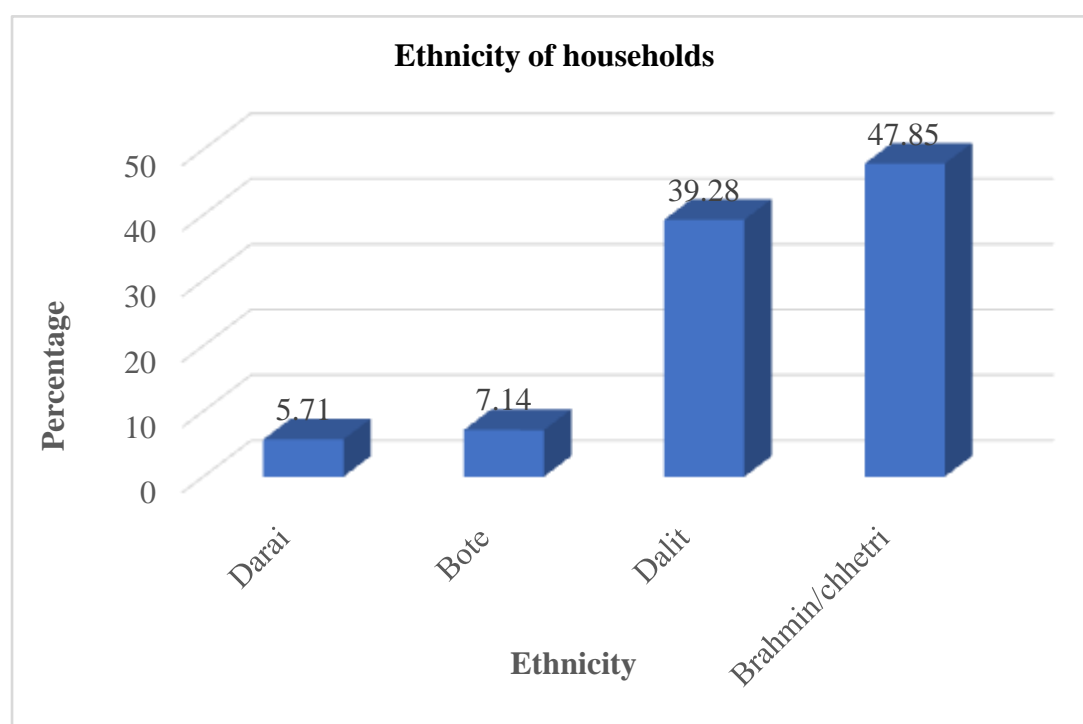
**Table 4.6 Caste and Ethnic composition of CFUGs**

(n=140)		
<b>Ethnicity</b>	<b>Number of households</b>	<b>Percentage</b>
Darai	8	5.71
Bote	10	7.14
Dalits	55	39.28
Brahmin/Chhetri	67	47.85
<b>Total</b>	<b>140</b>	<b>100</b>

(Source: Field Survey, 2022)

The above table 4.6 and below bar diagram shows the caste and ethnicity composition of community forest. Brahmin/Chhetri and Dalit are dominant ethnic groups of the study area. The Brahmin and Chhetri are the major caste groups who have played the crucial role to protect and manage the forest and they comprise 47.85 percent and that is followed by Dalits as 39.28 percent.

**Figure 4.3 Caste and Ethnic composition of CFUGs**



(Source: Field Survey, 2022)



## 4.2 Economic Status of the Community Forest User Households

### 4.2.1 Economic Level of the Households

Economic status can be defined in different way in different contexts. In this study, the economic status is divided into poor, lower medium, upper medium and rich in accordance their income sources, occupations, fuel used for cooking, land holding size and types of their house structure. The poor status group are those who have *kachhi* house structure, no regular sources of income, no land holdings. Lower middle group are those households who have temporary income sources from wage laborer and have land only for shelter. Upper middle group are those who can afford their daily consumption only and have at least semi *pakki* house, they have their own business and land for food sufficiency. Upper Group in this study are those who have sufficient income and permanent income source and stable their own business and *pakki* house structure.

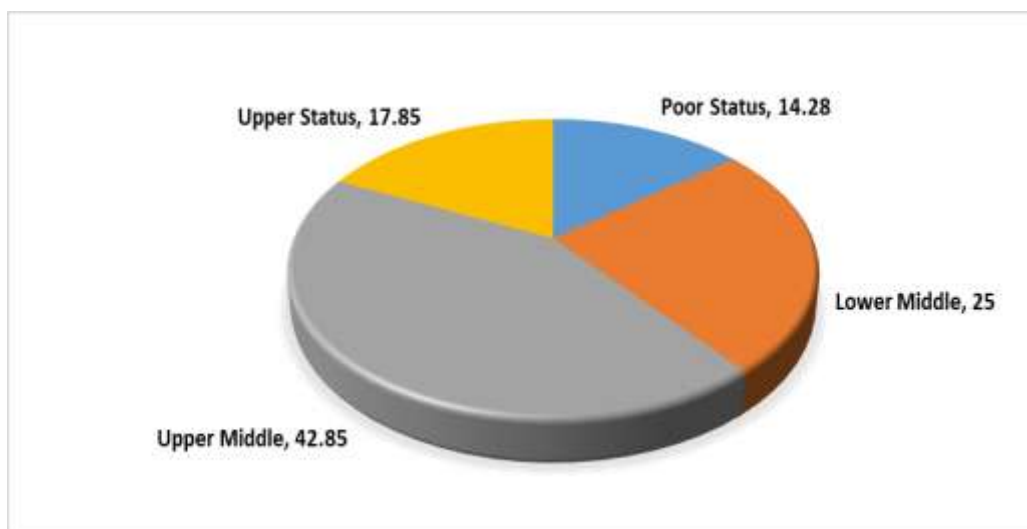
**Table 4.7 Economic level of household**

Economic status of family	Number of households	(n=140)
		Percentage
Poor Level	20	14.28
Lower Middle	35	25
Upper Middle	60	42.85
Upper Level	25	17.85

(Source: Field Survey, 2022)

Above table 4.7 and following pie chart showed the economic status of family of community forest users. This revealed that in the majority of the household (67.85 percent) were from medium family followed by 17.85 percent were in higher status and 14.25 percent were very poor.

**Figure 4.4 Economic Level of the Family**

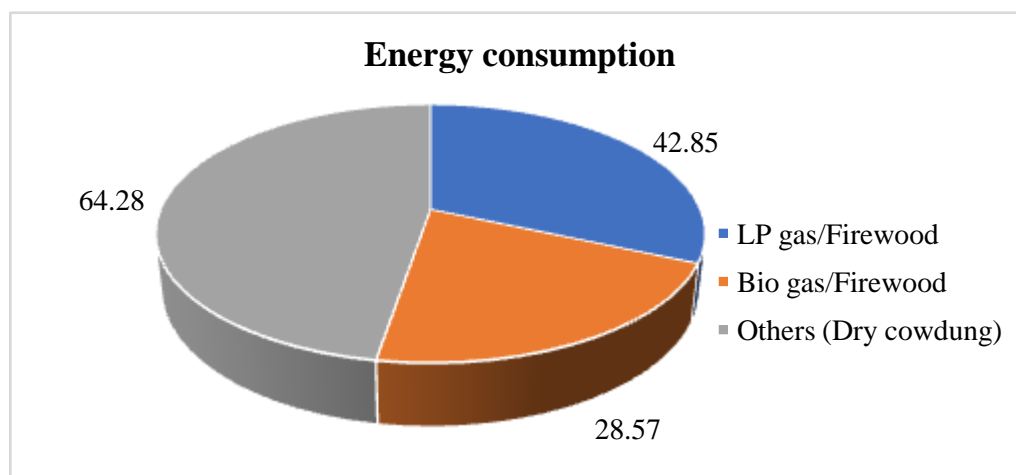


*Source: Field Survey, 2022)*

#### **4.2.2 Fuel Consumption for cooking**

Forests have traditionally been the major energy source in Nepal. Recently, the use of improved cooking stoves (ICS), LP Gas, Bio Gas, Agricultural residues, solar energy etc. as energy is increasing day by day in the areas of Nepal. But in the study area the members of CFUGs use different types of fuel as energy such as firewood, biogas, LP gas, dry dung (Guitha) etc. The status of Energy (fuel) has been represented in the following table.

**Figure 4.5 Energy consumption by household**



*(Source: Field Survey, 2022)*

The figure reveals that out of the total sample household 140 sample household (64.28 percent) use LP gas/firewood for cooking. Similarly, 28.57 percent use Bio-gas, LP gas and firewood used as energy source. It indicates that like other rural areas of Nepal the users of the study area are still mostly dependent on firewood as everyday source of energy.

#### 4.2.3 Main Occupation of Household

Forest in this area is a major source of livelihood. Majority of the peoples are involved in agriculture. Forest is the major source for farmers in various aspect.

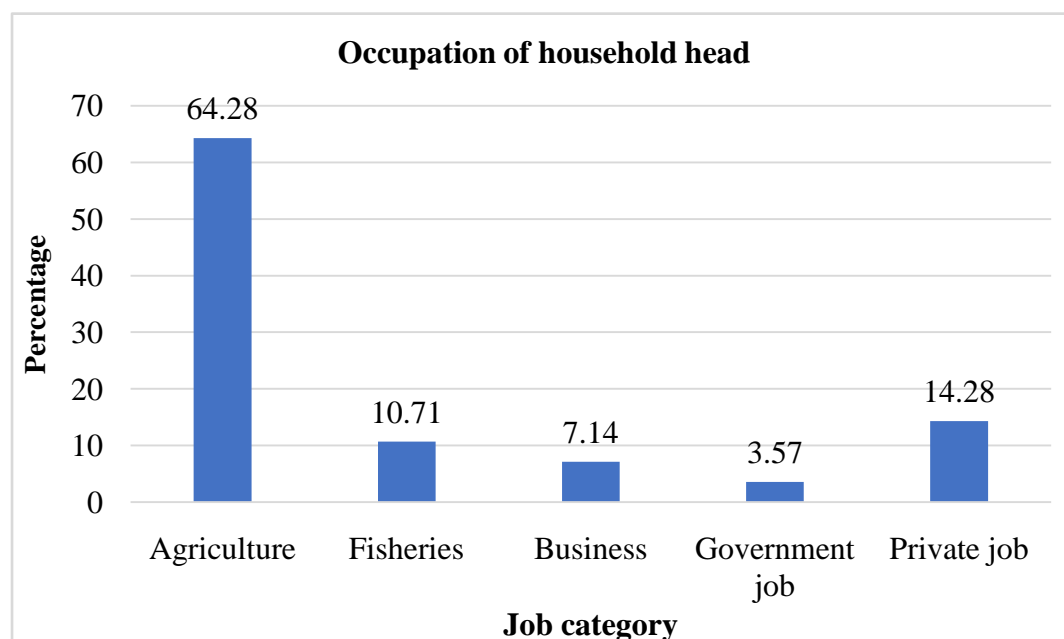
**Table 4.8 Main Occupation of household head**

Occupation	Number of households	(n=140)
		Percentage
Agriculture	90	64.28
Fisheries	15	10.71
Business	10	7.14
Government job	5	3.57
Others (private job, Fiddlehead, labor)	20	14.28

*(Source: Field Survey, 2022)*

The table 4.8 reveals that out of the total sample household 140 sample household (64.28 percent) are involved in agriculture, followed by 14.28 percent are involved in (private job, fiddlehead and labor) likewise 10.71 percent involved in fisheries.

**Figure 4.6 Occupation of household head**



(Source: Field Survey, 2022)

#### **4.2.4 Domestic animals of community forest**

Community peoples are depending on the forest as majority are involved in agriculture. Peoples have various type of domestic animals. For these animals they are taking grass as well as others product from the forest. Although they have different types of domestic animals, but here only those animal were taken on which the household focus on.

**Table 4.9 Domestic animals of community forest users**

(n=140)		
<b>Domestic animals</b>	<b>Number of households</b>	<b>Percentage</b>
Buffaloes	60	34.88
Cow	40	23.25
Goat	35	20.34
Fishery	22	12.79
Others	15	8.72

(Source: Field Survey, 2022)

The table 4.9 reveals that out of the total sample household 140 sample household (34.9 percent) had buffalo, 23.25 percent had cow as well as 20.34 percent had goat and 12.8 percent involved in fishery. The community forest user group also has pigs, hens, chickens and ducks.

#### 4.2.5 Land Holding Size of the Households

As different variable to show the socio-economic status, the land holding size is one of the important variables. The community forest user group have different land holding. Some have sufficient land for their food sufficiency and grazing their animals but some were found totally dependent on community forest. The land holding size is shown in the table given below.

**Table 4.10 Land holding size of community forest users**

(n=140)		
<b>Land holding size (Katta)</b>	<b>No of Household (Having land)</b>	<b>Percentage</b>
More than 10	23	16.42
5.1-10	35	25.00
1-5	30	21.42
Less than 1	35	25.00
Landless	17	12.14
<b>Total</b>	<b>140</b>	<b>100</b>

(Source: Field Survey, 2022)

The table 4.10 reveals that out of the total sample household (140 sample household), 12.14 percent household are land less, 25 percent had less than 1 katha as well as 5-10 katha and 21.42 percent had 1-4 katha whereas 16.42 percent had more than 10 katha.

#### 4.3 Benefits Receiving by User Group from Community Forest

Community peoples are depending on forests for our survival, from the air we breathe to the wood we use. Besides providing habitats for animals and livelihoods for humans, forests also offer watershed protection, prevent soil erosion and mitigate climate change. Yet, despite our dependence on forests, we are still allowing them to

disappear. People in this area are getting benefited in many aspects like grass collection, firewood, fiddlehead.

### 4.3.1 Benefits for Daily Life

Community forest is important for the people near by the forest for their agriculture and animal husbandry occupations. The households get varies benefits form the community forest. Besides various social benefits, the user household get benefits for their daily life.

**Table 4. 11 Benefits taken from forest (Multiple responses)**

<b>Benefits taken from forest</b>	<b>Number of households</b>	<b>(n=140)</b>
		<b>Percentage</b>
Grass collection	92	28.22
Firewood	80	24.53
Leaf litter	47	14.41
Tree fodder	37	11.34
Grazing	30	9.2
Others (Pole, Fiddlehead)	10	3.06
Fiddle head	30	9.2

(Source: Field Survey, 2022)

Above table and below bar diagram showed the benefits taken by community people from forest. This showed that 28.22 percent households used forest for grass collection, 24.53 percent used for firewood collection. Similarly, 14.41 percent used for leaf litter and only 3.06 percent used for others purpose. Beside this, the community forest provides some indirect benefit such as environmental side scene, animal habitat.

### 4.3.2 Income generation from forest product

Many community peoples in these areas are dependent on forest resources for subsistence use and as a source of income. Animal husbandry is mainly depending on community forest in the study area.

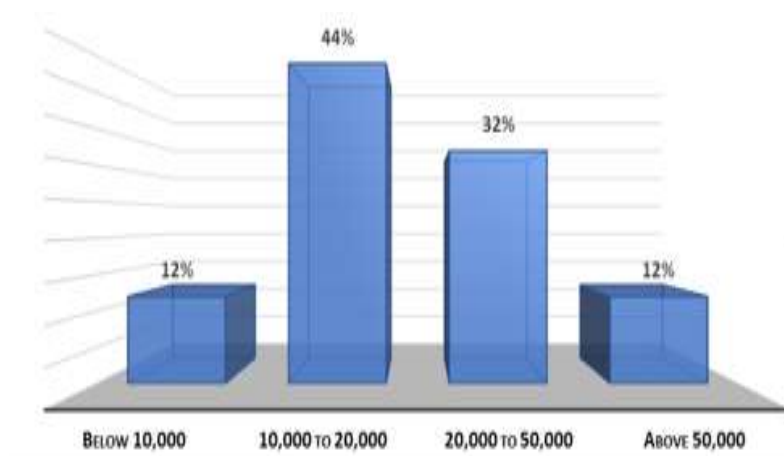
**Table 4.12 Average Monthly Income from Community Forest**

(n=140)		
Monthly income (Rs)	No. of household	Percentage
Below 10,000	17	12
10,000 to 20,000	62	44
20,000 to 50,000	45	32
Above 50,000	17	12
<b>Total</b>	<b>140</b>	<b>100</b>

(Source: Field Survey, 2022)

As well as timber, people use forest products to their animals, plants and fungi, known as non-timber forest products (NTFPs). Improved management of NTFPs could help people make more money from these materials, as well as protect forests more effectively. The overall income generation from community forest is mentioned in the table no 4.12.

**Figure 4.7 Average Monthly Income from Community Forest**



(Source: Field Survey, 2022)

Above figure shows that, among the forest users' group about 44 percent earn Rs 10,000 to 20,000 per month due to agriculture, crops, fiddlehead, animals. Similarly, 32 percent earn Rs.20000-30,000 per month. However, 12 percent earn money below Rs 10,000 and above Rs 50,000 per month.

### 4.3.3 Changing in Housing Condition

Community peoples are getting benefits from forest. They improve their socioeconomic status in various aspect like they improve their housing condition, income, education status. In the surveyed area/field the houses are of different kinds physically. The physically structure of the houses in the area show the income and economic condition before and after receiving forest products of the household's level. By getting raw materials for housing construction, the household of the community forest user group are found improving their housing condition.

**Table 4.13 Housing Condition Before and after using forest products**

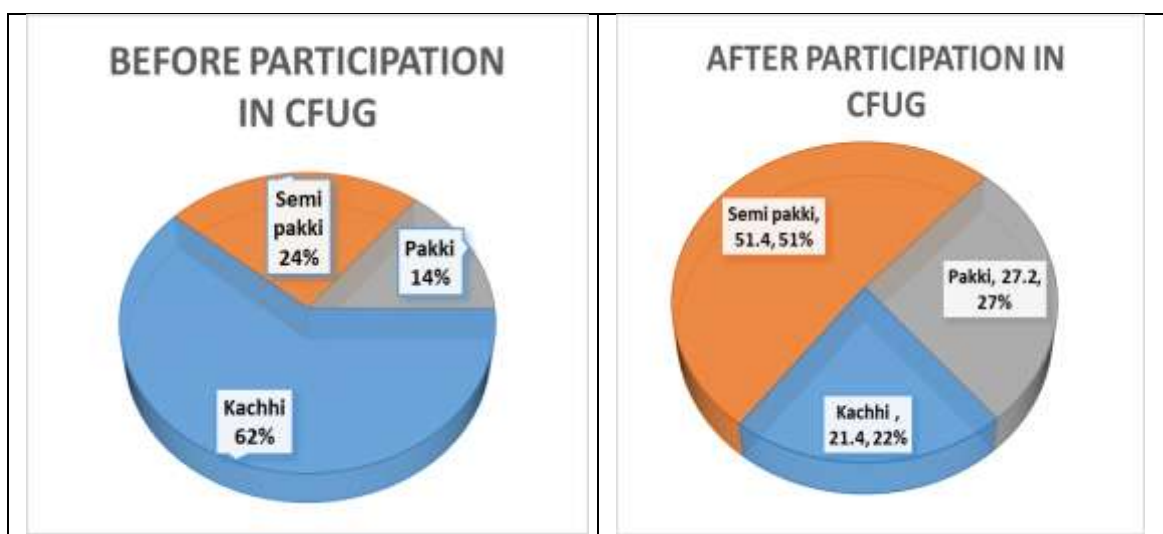
Type of House	Before using forest product		After using forest product	
	Number	Percent	Number	Percent
Kachhi	86	61.4	30	21.4
Semi pakki	34	24.3	72	51.4
Pakki	20	14.3	38	27.2
<b>Total</b>	<b>140</b>	<b>100</b>	<b>140</b>	<b>100</b>

(Source: Field Survey, 2022)

The above given table shows that most of the households have *Kachhi* house before using forest resources, 40 percent of *kachhi* houses were changed and upgraded up to semi pakki and semi *pakki* were upgraded to *topakki*. This figure shows that the structure of the houses has been change after the participation of CFUG. It is because the economic conditions of the families have been uplifted due to the using forest resources. The number of cemented houses has been more, which is the positive side of using forest resources in income.



**Figure 4.8 Improvement on Housing Condition of the Households**



(Source: Field Survey, 2022)

#### 4.3.4 Creation of Investment Expenditure

The household can invest their generated income from community forest in order to fulfill their daily life. Beside this, it is found that the income is used for long run invest purpose.

**Table 4.14 Investment of Income Earned From community Forest**

Investment items	Number of households	Percentage
Regular household expenses	140	100
Education	49	35
Purchase of electronic item	33	24
Celebration of festivals and ceremonies	29	20.9
House/animal shed construction/ repairs	8	6
Starting/expansion of business	9	7
Purchase of machines/equipment	5	4
Foreign employment	7	5
Purchase of land	4	3
Purchase of jewelleryes	3	2.3
Construction of bio-gas plant	3	2

(Source: Field Survey, 2022)

Above table shows the income earned from the sales of animals as well as forest product (like fiddlehead). Regular household expenses were the most commonly reported items of investment of the income. All the households reported this item of investment. Relatively small proportion of the households reported the investment of the income in education of their children (35 percent), purchase of durable electronic items (24 percent) and celebration of household festivals and ceremonies (20.9 percent). The income also seems to be helpful to construct and repair the house and animal shed (6.5 percent), purchase machinery items (4.8 percent), and manage foreign employment (4.8 percent). A few households have also used the income to increase the real assets in terms of the purchase of land (3.2 percent) and jewelries (3.2 percent) and the construction of the biogas plant (3.2 percent). All these amply indicate that income earned from the sales of forest product has positive support to the economic condition of the households

#### **4.3.5 The Socio Personal Benefit of the Households**

The Community Forest user groups were asked about the socio personal benefit from the community forest. As reported by the respondent the households are benefited in this socio personal area.

**Table 4.15 The Socio Personal Benefit of the Households**

<b>Descriptions</b>	<b>No of household</b>	<b>Percent</b>
Easy way for daily life	135	96.42
Improved and sustainable flow of forest product	130	92.85
Positive impact on livelihood	120	85.71
Increase in economic activities	106	75.71
Ecological development	102	72.85
Improvement in Education	85	60.75
Increase in social activity	82	58.57
Improvement in family health	52	37.14
Increase in real assets	54	40.71
Increase in social participation of marginal group	43	30.71
Improvement in loan purchase capacity	42	30.00
Increase in women's social participation	34	24.28

*(Source: Field Survey, 2022)*

As reported by the respondent, the community forest user group are benefited in various dimension of the society. By joining in the community forest user group all of the respondent reported that they have easy way for daily life. Most (more than 70 percent) of the user group reported that the community forest product is helpful for sustainable sources of forest and positive impact in economic improvement and the livelihood. Nearly half of the respondents reported that it helps to increase the social activities and helps in improvement of health and education status. By increasing the real assets, it also helps to improve the social participation of Women and the marginal group.

#### 4.3.4 Facing problems by the Households from community forest

Although the community forest is eco-friendly natural resources for all the creatures, The community forest sometime creates problem for the community Forest user group. As reported by the respondent, there are various notable problems facing by the community forest user group. Which are mentions in table No 4.16.

**Table 4.16 Problems faced by community forest**

			<b>(n=140)</b>
<b>SN</b>	<b>Major Facing Problems</b>	<b>No of Households</b>	<b>Percent</b>
1	Problems in crop protection from wild animals	135	97
2	Limited access in forest product and resources	120	86
3	cattle protection Problems from wild animal	76	54
4	conflict between wild animal and human being	72	51
5	Unfavorable forest policy	64	46
6	Limited access in decision making	46	33
7	Monopoly of the executive committee	32	23
8	Discrimination in participation	28	20
9	Fire and dust particles problems.	46	33

*(Source: Field Survey, 2022)*

Most of the respondents (79 percent) reported that they have some common problems. Almost of the respondent reported that they cannot protect their crop production from wild animal because of the nearby location of community forest with Chitwan National Park. Lots of wild animal come and destroy their food crops as well as vegetable crops.

Near half of the respondents (50 percent) stated that the conflict event is increasing. A kind of fear is created from wild animal like rhinoceros, wild cat, Jackal. The wild animal also attacked domestic animals, so it also the one main problem. As reported by some committee forest user group, there is limited access forest product and resources. The unfavorable forest policy makes problem for them, because this type of policy cannot provide forest product and resources sufficiently. One fourth of the respondent reported that there is monopoly of executive committee. Those who are in and near the executive body of the community forest they can get more facility than other. Poor people and marginal group are far from the forest resources Timber and main sources of income. There are discriminatory activities in participation of decision-making process. Poor and marginal group have no access in decision making.

## **CHAPTER V**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary**

The community forest program is being speeded all over the country and is being the good example of community development approach. This program is focused on participate all local people including minor, marginalized and excluded class and disadvantage groups. This study is focus in helping to fulfill the livelihoods of people.

The use of community Forest is a part of branch of forestry where by local community plays a significant role in forest management and land use decision making themselves in facilitating support of government as well as change events. it involves the participation and collaboration of various stakeholder including community, government and non-governmental organization. The use of community forest is important to support the daily activities of the people live in the society.

The people of Ghailaghari community forest GFC group user fulfill their basic needs from the forest such as; fodder for livestock, manure for harvesting land, timber for the construction of houses. The total population of the sample households this area is about 466 among them 238 were male and 228 were female. Majority of people were involved in agriculture and their education is basic education.

The economically active group is found as the highest proportion of population in the study area is in the age group of 16-59 was 50.67 percent. While, very low proportion belongs to below 5 years.

The educational status of the study area 9.22 percent of the total population were found illiterate. Educated populations with Literate were found 90.78 percent which is excellent percentage of the education status of household population.

The majority of the household (57.15 percent) had male as a household head were as in 42.85 percent household had female household head. There are 365 family members in the sample household of 140 that renders the average number of family members in household to be 3.

The caste and ethnicity composition of community forest are Brahmin/Chhetri and Dalit are dominant ethnic groups of the study area. The Brahmin and Chhetri are the major caste groups who have played the crucial role to protect and management. The majority of the household (67.85 percent) were from medium family followed by 17.85 percent were in higher status and 14.25 percent were very poor.

140 sample household (64.28 percent) use LP gas/firewood for cooking, 28.57 percent use Bio-gas, LP gas and firewood used as energy source. The study shows that, like other rural areas of Nepal the users of the study area are still mostly dependent on firewood as everyday source of energy. Out of the total sample household 140 sample household (64.28 percent) are involved in agriculture, followed by 14.28 percent are involved in (private job, fiddlehead and labour) likewise 10.71 percent involved in fisheries. The total sample household 140 sample household (34.9 percent) had buffalo, 23.25 percent had cow as well as 20.34 percent had goat and 12.8 percent involved in fishery. Out of the total sample household (140 sample household), 12.14 percent household are land less, 25 percent had less than 1 katha as well as 5-10 katha and 21.42 percent had 1-4 katha where as 16.42 percent had more than 10 katha.

28.22 percent households used forest for grass collection, 24.53 percent used for firewood collection. Similarly, 14.41 percent used for leaf litter and only 3.06 percent used for others purpose. Beside this, the community forest provides some indirect benefit such as environmental side scene, animal habitat. The forest users' group about 44 percent earn Rs 10,000 to 20,000 per month due to agriculture, crops, fiddlehead, animals. Similarly, 32 percent earn Rs.20000-30,000 per month. However, 12 percent earn money below Rs 10,000 and above Rs 50,000 per month.

. As reported by the respondent, the community forest user group is benefited in various dimension of the society. By joining in the community forest user group all of the respondent reported that they have easy way for daily life. Most (more than 70 percent) of the user group reported that the community forest is helpful for sustainable sources of forest and positive impact in economic improvement and the livelihood. Product. Nearly half of the respondents reported that the community forest helps to increase the social activities and helps in improvement of health and education status.

By increasing the real assets, it also helps to improve the social participation of Women and the marginal group.

A kind of fear is created from wild animal like rhinoceros, wild cat, Jackal. The wild animal also attacked domestic animals, so it also the one main problem. As reported by some committee forest user group, there is limited access forest product and resources. The unfavorable forest policy makes problem for them, because this type of policy cannot provide forest product and resources sufficiently. The respondent reported that there is monopoly of executive committee. Those who are in and near the executive body of the community forest they can get more facility then other. Poor people and marginal group are far from the forest resources. Timber and main tourism are main sources of income. There are discriminatory activities in participation of decision-making process. Poor and marginal group have no access in decision making.

## **5.2 Conclusion**

From the field evidence and research experience, it is seen that a capable institution contributed more to the management of community forest because forest management requires more labor inputs to operate different operations in different seasons as planned by the FUGs. All the forest users including women, ethnic group, Dalits and poor have participated in decision making process after the management of community forest was taken over by the local community. The formerly degraded area is now full of trees and other different types of vegetations. CFUGs have been contributing to increase the biodiversity with the control of unregulated exploitation of forest products. Similarly, CFUGs are contributing to enhance different capitals such as financial, human, social, natural and physical capital in the community. The trend shows the increasing contributions of community forestry in the improvement of the livelihood of disadvantaged households. However, it is essential to ensure the rights of the poor and marginalized section of the community in the constitution and forest operation plans along with national level plans and policies. Mobilization of group fund for improvement of livelihoods of these poor members was be an important area to enhance their ownership and participation towards community forest. From an institutional perspective, the policy environment for community forestry is favorable. Further decentralization of the forestry sector is envisaged in the

interim constitution as well. This was providing an opportunity for local governments and forest user groups to share responsibility and benefits from forests. Community forestry policy has sought to increase the local institutional capacity through formation of user groups (UGs). All these initiatives and actions towards community forest can play a vital role in forest resource management and securing livelihood of the local people.

### **5.3 Recommendation**

This research is based upon few variables (only based on socioeconomic prospective of household), so this study can be enlarged by using more variable and more area coverage. This research is based upon the primary data and some secondary data and similar type of research can be conducted using other econometric models. Majority of the household head pointed out the problem towards the management of community forest. So, local government needs to make effective planning and policy needs to be formed by including local user group into internal affairs of forest management. Also, there is need to make effective planning and policy for the management of wild animals and equal participation of user group. Likewise, community forest needs to reach out to poorest of the poor and include them to take benefit from the forest. Similarly, the local user group opinions should be taken more seriously by the authorities of the forest so that better policy could be built. Similarly, the forest authorities should lessen the chances of conflict between wild animals and local inhabitants.



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4) What is source of energy in your household?

LPG gas..... Bio Gas..... Firewood.....

5) What changes did you felt in housing condition of your house before and after using forest product?

Variables	before	After
Kaccha		
Semi-pakka		
Pakka		

6) Are you engaged in Animal husbandry and livestock? Yes ... No.....

If yes... what animal do you own? Chicken..... Goat.....

Cow/buffaloes.....Fisheries.

7) Do you have your own land?

Yes..... No.... "if Yes" .....bigha.....kattha.....dhur

8) What benefits did you receive from Forest?

.....fire woods.....pastures/animal grazing.....fiddle picking..... Animal fodder .....others(specify)..... Tourism attraction

8) what are the various problems do you faced community forest?

Problems in crops protection from wild animals.....

Limited access in forest product and resources.....

Cattle protection problems from wild animals.....

Conflict between humans and wild animals.....

Unfavorable forest policy.....

Limited Access in decision making.....

Others (please specify) .....

11) What is tentative income your household generated from forest product?

Below 10,000.... 10,000 to 20,000..... 20,000 to 50,000.... Above 50,000.....

13) Where did you invest income earned from forest produce?

Regular household expenditure..... education..... Purchase of electronic items.....

House/animals shade construction..... starting new business ventures..... others.....

14) What socio-personal benefits do you received from forest?

Easy daily lives..... improved forest product..... Positive impact in livelihood.....

Increase in economic activities..... ecological development..... improvement in education..... others (please specify) .....