

**SOCIO-ECONOMIC CONTRIBUTION OF COMMUNITY  
FOREST ON TULSIPUR MUNICIPALITY  
(A Case Study of Gairakhali Community Forest)**

**A Thesis**

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**Submitted By**

**Mr. Ram Prasad Bhusal**

**Roll No:406**

**Regd No: 6-1-320-39-2003**

**Central Department of Economics**

**Tribhuvan University, Kirtipur,**

**Kathmandu, Nepal**

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## **RECOMMENDATION LETTER**

This thesis entitled "**Impact of Community Forestry on Rural Economy: A Case Study of Gairakhali Community Forestry of Tulsipur Municipality Ward No. 6, Dang**" has been prepared by **Mr. Ram Prasad Bhusal** for partial fulfillment of the requirements for the degree of Master of Arts in Economics under my guidance and supervision. I fully approve this thesis and forward it with recommendation for approval.

---

Khagendra Katuwal

Lecturer

Thesis Supervisor

Date: 2072-12-29

## **APPROVAL LETTER**

This is to certify that this thesis submitted by Ram Prasad Bhusal entitled "**Impact of Community Forestry on Rural Economy: A Case Study of Gairakhali Community Forestry of Tulsipur Municipality Ward No. 6, Dang**" has been approved by this department in the prescribed format of the Faculty of Humanities and Social Sciences. This thesis is forwarded for the evaluation.

### **Evaluation Committee**

---

**Prof. Ram Prasad Gyanwaly**

Chairman

---

**Dr. Rashmi Rajkarnikar**

External Examiner

---

**Khagendra Katuwal**

Thesis Supervisor

Date: September, 2015

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## ACRONYMS

CBS	=	Central Bureau of Statistics
CDCS	=	Community Development Committees
CF	=	Community Forestry
CPF	=	Common Property Forestry
EC	=	Executive Committee
CFUGs	=	Community Forest User Groups
DDC	=	District Development Committee
DFO	=	District Forest Office
FUG	=	Forest User Group
GON	=	Government of Nepal
HA	=	Hector
HHs	=	Households
IOF	=	Institute of Forest
IGAs	=	Income Generating Activities
INGOs	=	International Non-Government Organizations
LFP	=	Livelihoods and Forestry Program
LF	=	Leasehold Forest
MPFS	=	Master Plan for Forestry Sector
NGOs	=	Non-Government Organizations
NFP	=	National Forestry Plan
NPC	=	National Planning Commission
NTFP	=	Non-Timber Forest Product
NUKCFP	=	Nepal-UK Community Forestry Project
OP	=	Operational Plan
SCFUG	=	Santi Community Forest User Group
UNDP	=	United Nations Development Programme
UMN	=	United Mission of Nepal
VDC	=	Village Development Committee

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

The forest in Nepal is known as wealth of country which provides the popularly used proverbs "Hariyo Ban Nepalko Dhan". Forest alone contributes 10 percent of total national GDP livestock get 28 percent of the total fodder from forest foliage (Forest, Information's, 2015). And fuel wood contributes 66 percent of the total energy resource which comes from forest resources (NPC; 2015). Forest has not only the economic value but also the aesthetic values, services values, beauty values, option values etc. Similarly, protective, regulatory & productive functions of the forest are invaluable for the organism and environment.

The forest has been contribution to the social, religious, cultural economic and environmental sector from the early human civilization; livestock rearing the forest sector have jointly contributed to the agricultural development of Nepal. While the agricultural contributes two third percent of total income in average, the forest sector has occupied one fourth percent of it. The conservation and development of the natural resource like forest is impossible from the government effort alone. Regarding this fact, the concept of community forestry development programme was introduced in Nepal since 1978/79 in the name of "Panchayati Conservation Forestry." After the experience of about a decade, there was made a contemporary change and it was again started from the beginning of 1990 as the aim of 'Master Plan' for the forestry in 1988. Since then community forestry development programme is being implemented with collaboration of the local people and financial support of donor agencies. Community forestry is involving in developing sectors like road construction, help to the school, scholarship management, blood donation, temple renovation etc. Likewise utensils buying for the programs like wedding ceremony, party, drinking water supply etc are also being conducted.

In the context of Nepal, forest covers 39.6 percent of total area of the country (NPC, 2015). But it is improved at the end of tenth plan as well as beginning of the interim plan. That is it becomes 39.6 percent of the total area. The population of Nepal has grown during last decade at the rate of 1.35 percent per year whereas forest has degraded at an annual rate of 1.7 percent per year (Forest Information's, May, 2015).

In rural Nepal, forest is an integral part of life. people depends on forest for fodder, fuel wood, timber, herbs, medicine and other forest products which are daily essential. In addition to this, forest is important for the settlement of wild animals and birds. Mainly, three types of forest are found in Nepal such as coniferous forest, deciduous forest and evergreen forest, which are available in mountain hill and Terai respectively. Community forest laid the foundation stone in the history of forest in Nepal. After the provision of the community forests, many rural communities have been involving in the utilization and management of forest.

The community forestry development programme is a success story in our country. It is considered as a successful example of the public oriented development programme. Under this program 14,227 user group have been formed till 2014/15 with 11, 85,563 nectars of land have been handed over to user's group in this programme. And 16, 35,667 households are involved (Economic Survey, 2014/15).

Forest Act, 1993 defined community forest as a national forest handed to in user's group for its development, conservation and utilization for collective benefit. (Forest Act, 2049(1993)).

Community forestry is helping to uplift the socio-economic condition of the rural areas. Community forestry is involving in developing sectors like road construction, help to the school, scholarship management, blood donation, temple renovation etc. Likewise utensils buying for the programs like wedding ceremony, party, drinking water supply etc are also being conducted. Income

generation sectors like herbs cultivation, bamboo, amriso, nigalo, daleghans, etc plantation, bamboo art (baskets, etc) are some remarkable work of the community forestry. A community forest may be modal community forest if it has conducted programs like mentioned above.

Community forestry is a kind of system in which the low people are all in all for its preservation, promotion, management and utilization. In doing so, consumer committee is formed out of the total members who belong to it. It is responsible for handing its activities like preserving, managing, planning for its development and so on. In addition, it sells its products among its members in low cost. The certain percentage of this income is utilized for the development and preservation of the forest and the rest for social works like provision of drinking water, irrigation facility, community development and so on. Community forest is one of the successful joint production systems in the contest of Nepal. Community forests boost up the efficiency power in the participation. It has played a crucial role to fulfill the requirements of forest products of rural people. As a sub-sectored Program of the tenth plan, community forestry aims to promote employment and income generation opportunities to poor and disadvantage families. It further promotes non-timber forest management. Managing community forest and focusing on non-timber forest products not only increased the income of CFUG but also generates employment for its users.

The product of community forestry like medicinal herbs and aromatic plants are important. So, they are important components for income generated activities of community forestry which we have recently realized. Bilateral projects such as the Nepal-UK community forestry projects (NUKCFP) are beginning to show interest in the potentiality of this community forestry in increasing the incomes of forest user groups involved in the community forestry. Income could be increased through improvement in cultivation, harvesting and marketing systems. So far as a part of income generation

activities not only the community forestry but also all kinds of forestry should be included in the success of this program.

## **1.2 Statement of the Problem**

Community forestry has been a changing process in Nepal since its initiation in 1970 A.D. The main plan of this strategy is to hand over governmental land for management by community forestry user groups. These are based on community people who use a particular forest for their daily and household needs. The achievements to date have been impressive where the community forestry programme has become fully -operational, particularly in the hilly areas where communities have used the generated income to build public facilities like schools, roads etc. and have greatly improved their lives. There has also been significant positive environmental impact.

The Gairakhali community forestry of Tulsipur, Dang was established in 1987. Basically, this study tries to explore:

- i. What are the socio- economic contributions of forest resource in study area?
- ii. How much forest resources generate income?
- iii. How the community forest can perform to social work?

Hence, the contribution of the study is to give valuable information's and references issues of participations groups, equity management and importance in community forestry development in Dang District.

## **1.3 Objectives of the Study**

The general objectives of this study are as shown as below:

- To know socio-economic contribution of Forest in study area?
- To analyze the importance of Gairakhali Community Forestry in terms of income generation

- To recommend some possible measures for the betterment of Gairakhali Community Forest.

#### **1.4 Significance of the Study**

Community forestry is the most effective programme in a rural agrarian country like Nepal. It makes the people feel that the forest belongs to them and they should look after it carefully.

In Dang district, very limited studies have been carried out about community forestry management system and importance of community forestry in the local economy.

The study will be useful to policy makers, planners and professionals in forestry to consider people's participation roles and importance in forest management more seriously. Similarly, it helps researchers to develop skill and confidence on the research purpose as well as enhance the scope and importance of community forestry in the local economy.

The main issues and aspects of community forest which conduct through Gairakhali community forestry of Tulsipur municipality in Dang is to identify where this community forestry has done social works like constructions road schools etc. This project has helped to improve the living standards of target groups which are marginalized from government. With the invention of Community forestry, local villagers have demonstrated their ability to generate poverty reduction practices. Providing soft loan to the poor for income generating activities such as knitting cloth from Allo plant is an example for the initiatives taken at the local level. Similarly, some of CFUGs are establishing and operating NTFP enterprises to provide local employment and value addition. But such innovations have not yet been expanded to have national level impacts.

Hence, the contribution of this study is to provide valuable information issues of participation, equity, management and importance in community forestry development in district and national level.

### **1.5 Limitations of the Study**

This study has the following limitations:

- a. This study has focused on only one user group. Therefore, the final outcome of the study may not give the whole picture of other groups. (Gairakhali Community Forestry of Tulsipur Municipality in Dang). Therefore, the final outcome of the study may not give the whole picture of the other groups.
- b. It is the memory biasness of the respondents. It is because the households don't keep records of their utilized forest product in Nepal. Hence, the data obtained from interviewing with them have been subject to memory bias. This study has supported infavour of economic impact of society of Gairakhali community forestry of Tulsipur Municipality, Dang.

### **1.6 Organization of the Study**

This study is divided into six chapters. The first chapter covers background, statement of problem, objectives of the study, limitation of the Study and organization of the study. The Second chapter presents the review of literature. It covers community forestry's concept, development and its effects. Third chapter deals with research methodology of the study. The fourth chapter covers the description of the study area and data analysis and economic contribution of community forestry. Finally, the fifth chapter presents the summary, conclusion and recommendation of the study.



## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

#### **2.1 Meaning of Community Forestry**

Community forestry is an evolving branch of forestry whereby the local community plays a significant role in forest management and land use decision making by themselves in the facilitating support of government as well as change agent. It involves the participation and collaboration of various stakeholders including community, government and non-government organization (NGO's) (Wikipedia, the free encyclopedia).

#### **2.2 Review of International Empirical Study**

**Gilmour and Fisher (1992)** have studied that Community forestry is a social process, concerned with management of forest and tree resource by complex and dynamic social institution and organizations. In addition, the community forestry approach puts the community at the center rather than the forest. Therefore, it is called “People centered forestry” Community forestry is an approach in which forest is managed, protected, and utilized by groups of local people on a sustained yield basis and works towards developing their own capability for self-reliance.

**Byron (1991)** has found that community forestry and rural development in developing countries are clearly economic matters, covering not only the efficiency of production of forest products needed by the communities but the equality distribution of the costs and benefits amongst the local people. But, the social aspect is equally important.

**Messerschmidt (1992)** has noted that equality is not a necessary condition for success in a cooperative system and that hierarchical social structures are not necessarily incompatible with some forms of cooperation. Equity involves

getting “Fair Share” not necessarily an equal share. What is regarded “a fair share” varies according to different situation.

**Eckholm and Ground (1976)** has created an increasing pressure on international development institutions and donor governments to contribute to the conservation of the degrading Himalayas. This led to a shift in the development discourse away from an emphasis on infrastructure and technology transfer, and towards environmental issues. Moreover, Nepal’s strategic geopolitical situation (being located between China and India) and fragile environmental condition attracted donors, who viewed forestry and environment as the key elements of integrated conservation and development projects.

**Agrawal and Ostrom (2001)** have enhanced the successful scaling up of the program included progressive legislation (Forest Act 1993) which also supported strong, autonomous and self-governed village institutions (CFUGs), and clarification of appropriate property rights arrangements for community members through the provision of the community forest management Operational Plan. Deforestation of authority from the centralized state to the district level bureaucracy, in which district officials were given the authority to constitute CFUGs, also played an important role.

**Livelihood and Forestry Programme (2006)** has proven to be an effective tool for managing and conserving forests where rural people depend on the forests for their daily substance. It also has the potential to reduce poverty by allowing the use of forest and community forest user group (CFUG) resources to improve the livelihoods of the forest and most excluded (CFUG) members. LFP and its partners have been developing good practices to ensure that poor and excluded people are targeted and that opportunities actually reach them. These practice made it possible to include there people in CFUG decision making in order to increase their voice, influence and their presence. Spaces for and practices of deliberation among diverse actors have expanded, forging

collaboration and social learning in support of decentralized and community-based management of forests in Nepal.

**Grownow (2010)** has described the history of Nepal's community forestry programme and argues for an approach to implementation which fosters local empowerment. After decades of disappointment with federal management of forest the Nepalese government enacted legislation in the 1970s to return management to local institutions, under the resumption of community forestry programme, government forests were turned over the Panchayat Party efforts focused primarily on reforestation projects. However, title input from community residents were solicited consequently local people did not perceive these tree plantations as theirs. According to the authors, most forestry personal in Nepal hold that local residents were causing forest degradation through ignorance, subsequent plans to educate local residents were not however perceived in terms of transfer of authority to locals. The author discusses a more recent approach to local empowerment the "User Group" which recognizes indigenous knowledge and encourages the formation of local groups which develop their own rules for forest management and use.

### **2.3 Review of Nepalese Empirical Study**

**National Forestry plan (1976)** has developed a public co-operation and participation programme to involve people in use and management of local forest. According to that direct benefit from forest made available to public. The forest office started to make alert people for usefulness of protection, the fodder grass and trees seeds were distributed to the rural people. The technical assistance to plant trees was provided by DFOs. Government started to encourage to plant tree through free seed in distribution private plantation and also provide natural forest resources to Panchayat organizations as PF and PPF. There are many scholars and researchers who have devoted their time to study forestry issue of Nepal. Their efforts to find out the forestry problems and solutions are considering valuable contribution.

However, here only some of the literatures of scholars and researchers have been viewed in order to know about the existing status of community forestry in Nepal.

**Upadhyaya (1989)** has assessed the perception, role view on distribution of common property forestry (CPF) to determine the factors influencing respondent's view on CPF products distribution and distribution equity. According to him, fact that the distribution of forest product like fodder, Grass, Timber, paroles, pies, sale leaves etc. should be distributed according to their contribution in community Forestry (CF) management in order to make them full benefited of their involvement. With regards to equitable distribution respondents showed that CPF product should be equitably distributed to the people in the area regardless of their involvement in CPF management and distribution scheme so that long term stability can be maintained. He revealed that socio-economic factors like age, income, caste and education of the household heads, education and age of women of income and education of local leaders significantly attend their perception of CPF management and product distribution. The production oriented forest module would yield more words and revenue than the protection oriented forest management module over a certain period of time. There would not be any adverse impacts on the environment It is also foreseen that about 3,000 persons' years equivalent jobs would be created annually from the better management of about 25,000 hectares of natural forest.

**Adhikari (1998)** has showed the impact of utilization of forest resources and economic condition of people in Dhading District. He has concluded in his study in the following points:

- a. Timber is used for housing and agricultural implements. Similarly, villagers use timber for making furniture like chairs, almari, tools etc. Approximately, 4,616 cubic feet of timber has been used for the construction of total new and old houses and the average is 44 cubic

feet. Many Newars and Brahmins have used larger amount of timber for the construction of houses than other ethnic group.

- b. Villagers of this area extract animal bidding in order to obtain high volume of compost manure to fulfill the manure requirement for their farmland. The high volume of compost manure substitute the demand of chemical fertilizer and with the use of compost manure of land will increase.
- c. The interrelation of cropping pattern, the animal husbandry and the forest has been an important feature of the village economy.
- d. From the economic point of view, the use of forest resource is contributing to the people such as an income generation, employment opportunities and in consumption directly or indirect.

**Giri (2000)** has suggested that community forestry is a viable strategy for the department of forest to manage the forest resources of the middle hills of Nepal. The users have been found happy about product distribution practices prevalent in their group. The users make an equitable contribution towards protection, management and equitable distribution of return product. He has also mentioned that equity in decision- making and distribution of FUGs funds are more complex processes. However, these processes found to all cases in his study have maintained relatively well in this regard. These user groups have achieved more equitable decision-making, distribution of funds and economic strength.

**Aryal (2001)** has identified that Pandey Gaun has high literacy rate i.e. about 77%. They are very much aware of conserving forest. The main occupation i.e. agriculture, cash crops (veg.) have helped to raise people's level of income. Livestock is also other main occupation. After implementing community forestry programme, they were able to enhance their business and agriculture activities. Villagers can get easy accessibility forest product co-operation among people and environmental benefits and community forest has been a source to support development and social works in the village. A temple,

electricity and road are the contribution of community forestry in this village. This depth of local ownership, action and empowerment over the Community Forestry program facilitated achievements within local communities that substantially impacted household livelihoods, hence food security. This overview summarizes the policy and institutional processes that enabled such depth of ownership at local level to occur, as well as the impact pathway from Community Forestry to improved food security at the household level.

**Kayastha (2003)** has studied that Nepal has successfully implemented community forestry programme with the active participation of local people forest committee found by user-groups take the responsibility of protecting, plantation and conserving natural forest people participation in stages of decision making, planning and reaping benefits. It has seen found that private planting is the most successful component of community forestry programme. Even the poor are willing to participate in community forestry programme because they can collect fuel wood and fodder from the community forests save their time for earning wages. The potential area of community forest in Nepal is 35, 61,600 hectares (61%) of the total national forests. The handing over process of community forestry has achieved a considerable process. As of January 14, 2003, 940,491 (26.41%) hectares of forest area has been handed over to 11,860 forest user groups, which benefit 13, 11,771 households.

**Dahal (2004)** in his article “Benefit-cost Analysis of community forest and its distribution Impact on rural Poor” seeks to investigate the equity concern of community forest management with the help of cost –benefit analysis whether recent policy shift towards local community based forest resource management in Nepal have able to address the rural poverty with increased access of community forest resources to rural poorer households. This article compares gross incomes accrue from and gross costs incur of CF to the rich, medium and poor households. Use of two major types of forest produces- consumption based and production based forest products observed in each CFUG as per the forest Act 1993 and forest regulation 1995. Active participation of poor,

women and disadvantaged group in decision-making is critical for effective community forest management and equitable benefit distribution among the users. Poor household, especially those without land, can not use fodder, leaf litter and other agriculture input these are benefits enjoyed mainly by better off households. Timber sold to CFUG members at below market price is mostly purchased and used by better off households. Poor and worse-off households do not have the need or ability to pay for timber. The poorest households do not benefit from the harvesting due to lack of legal provision to sell unused products. The distribution system in CF is criticized for failing to provide more benefits to the poor households. Some of the recent finding show that C F has in fact made income distribution even worst variation in quality and quantity of community forest between different groups results in some benefits than other groups.

The community forestry in Nepal is said to be unable to be distributed common property forest resource equally and provide a significant contribution to the livelihood of poor and marginalized people. The main reason of community forestry not to be poverty responsive may be the basic policy objective remains only the fulfillment of subsistence needs and its failure to take into account well being benefit approach. More resource generation from the CF depends upon more types and volume of forest products through the productive attitudes of policy rather than rely on conservation of nature gifted available resources like wise, more equitable community forest resources depends on systems and practices of equitable forest products distribution so that poor income households could realized the full value of the share of forest products available to them (Dahal, 2006:103).

**Dahal and Dahal (2005)** has initiated to achieve the national goal of poverty reduction. But, despite two decades of successful implementation, the programs contribute to poverty alleviation is far from satisfactory. A study was carried to examine how CF funds have been established through the collection of fees, fine and donations, and how these funds actually

contribute to poverty reduction. This study has carefully scrutinized the investments made from these funds in order to analyze their impact on poverty alleviation. The forestry sector of Nepal has strong forward linkages to other sectors of the national economy. In light of these positive livelihoods and environmental outcomes, Community Forestry has been one of the few promising aspects of Nepal's post War II history. It has often been used as a face-saving instrument by development actors who have been engaged in, if not responsible for, the five decades of "failed development" in Nepal. The positive image of Community Forestry in Nepal has been articulated not only in the fields of development and natural resource management.

**Thirteenth Three Years Plan (2013 -2014)** has emphasized that CF for creating on come generating opportunities for the poor and focuses in the involvement of INGOS and CBOS (community Based Organizations) in carrying out income generating activities for poverty reduction of rural development.

**Chhetri (2013)** has suggested that participation in community forest management activities is dependent upon various social, economic and biophysical factors. Larger size of households has represented in forest user committee who has own less land and they have involved in protection of forest .Numerous of Women households has closed to the forest and market which has showed their strong positive influence on participation in forest resource utilization. Lack of education opportunity and traditional customs are the key factors for the low participation of women and lower caste in decision making in forest user group committee.

**Subedi (2014)** has supported a number of CFUGs to provide exclusive management rights to groups of poor households, for cultivation of income-generating crops and agro forestry. Although currently few in number, some CFUGs do provide community lands to their landless or near-landless members, so that they can earn their living through cultivation of medicinal



herbs or other crops. Several CFUGs give preference to poor members or women in locally created jobs, such as for processing of handmade paper or working as a nursery laborer

**Forest Action Nepal (2015)** has depicted that community forestry is related with 'Carbon-offsetting' projects which are widely seen as the ideal solution change, biodiversity and socio economic development. Hopes are being pinned on the potential of Reducing Emissions from Deforestation and Degradation (REDD) schemes, which after 2012 will represent the most likely route for bringing the currently excluded community forest into officials' climate change mitigation.

**Kayastha (2015)** has argued that involvement of women is crucial for the success of community forestry. Women are the major collector's forest products such as fuel wood, fodder and foods from the forest. They cook food and do most of the domestic work. Therefore, it is they who suffer the social and economic consequences of deforestation most directly, having to spend more time and walk longer distance in search of this essential forest product. There is a complete women's forest committee in Darchhula district, which is performing very well (Chand and Wilson 1987). But it may not be the same elsewhere.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

Tulsipur Municipality Ward No. 6 has been selected for the study. This is analytical as well as descriptive type of research design. The data collection should be meeting the objectives of this study. Data have been taken from the primary and secondary sources. The sample has been selected on the basis of the family whose members are involving in community forest programme.

#### **3.2 Source of Information**

The study is based on both primary as well as secondary data. The primary data has been collected through the technique of purposive sampling survey. The direct observations by the discussion have been done with forest users by the researcher. The secondary data have been tapped from various types of relevant literature such as journal, articles, dissertations, research report, and text books, DFO, CFD and DF etc. However, the study is mainly based on the primary data, which has collected from the users of CF. Therefore; the user group member of Gairakhali Community Forestry is the primary respondent.

#### **3.3 Methods of Data Collection**

The data have been collected with the help of structural, semi structural and open questionnaire covering economic status distribution patter of forest product and available major forest products in the community forest. This includes self appraisal, interview, direct observation and focus group discussion. Formal interview has been done with the members of the forest users committee of forestry professional to obtain information.

### **3.4 Sample Size**

The population of the study is all 1075 user households in the study area. Out of which, about 200 households have been taken randomly as sample without replacement. Actually, this area lays inner Terai. So, the density of population is high as well as they have been settled very closely. Hence, due to the population and geography only 200 sample households have been taken.

### **3.5 Method of Data Analysis**

The data collected from field and respondent have been classified, tabulated and analyzed in terms of simple statistical tools like frequency, percentage and mean and present in the form of tables, pie chart, bar diagram etc. Descriptive method has been taken into consideration to obtain the basic purpose of the study.

# **CHAPTER FOUR**

## **SOCIO-ECONOMIC CONTRIBUTION OF COMMUNITY**

### **FOREST ON STUDY AREA**

#### **4. Background of District**

##### **4.1 Location**

Dang district lies in the Mid- Western Development Region of Nepal; it is 27<sup>0</sup> 52' to 28<sup>0</sup> 13' N latitude and 82<sup>0</sup> 2' to 82<sup>0</sup>5' E longitude. The area of this district is about 2955 sq. km. The climate of Dang varies from tropical to sub tropical. The average maximum temperature is 31<sup>0</sup> C and the average minimum temperature is 15<sup>0</sup> C. Dang district has 39 village development committees and 2 municipalities. This district lies 213m to 2058 m high from sea level. This district is surrounded by Chhura and Mahabharat Parbat. So, it is also called Dang valley. The important rivers flowing through this district are Rapti, and Babbai, etc.

##### **4.2 Population and Ethnicity**

The population of Dang district is 4, 62,380 which includes 2, 28,958 male and 2, 33,422 female. The population growth is with the rate of 0.8% per year. The numbers of households are 83,162. The major ethnic groups of the district are Brahmin, Khhetri, Gurung, Tharu, Sharki, Kami, Damai etc. (CBS 2011).

##### **4.3 Educational Status**

There are 630 members of schools all together (primary, lower secondary, secondary, higher secondary school). The literacy rate of the district is 58% above six years old. Where female literacy is 46.9% and male literacy is 53.1% (DDC, 2014)

#### 4.4 Profile of Tulsipur Municipality Ward No.6

Ward No. 6 of this municipality is located in the eastern region of Dang district which lies in Mid-Western Development Region of Nepal. This Ward is divided into 9 wards. The total population of this Ward is 15,854 where male numbers are 7,977 and female

are 7,866. Besides agriculture, teaching, governmental and nongovernmental services and sales service are including in occupation. Majority of the population are Hindus. There is almost eight community forestry. Among them Tulsipur Municipality forest is well developed than other of Dang district.

##### 4.4.1 Population Distribution by Caste/Ethnic Group in Tulsipur Municipality.

According to National census report 2011, the population distributed by caste/ethnic group of study area has been tabulated in table 4.1.

**Table 4.1: Population Distribution by Caste/Ethnic Group**

SN	Caste/ethnic group	Population	Percentage
1	Bahun	3171	20%
2	Kshetri	3171	20%
3	Magar	792	5%
4	Kami	317	2%
5	Sarki	317	2%
6	Tharu	7135	45%
7	Gurung	317	2%
8	Damai	159	1%
9	Badi	79	0.5%
10	Others	396	2.5%
Total		15854	100%

Source: Census 2011 CBS.

According to this table, there are more than 10 castes viz. Bahun, Kshetri, Magar, Kami, Sarki, Tharu, Gurung, Damai, Badi, and others. Among them, Tharus are large number which takes 45% of the total population of this municipality.

#### 4.4.2 Population by Religion

**Table 4.2: Population by Religion**

Religion	Population	Total Population
Hindu	15,220	96%
Buddha	159	1%
Islam	318	2%
Christian	79	0.5%
Others	79	0.5%
Total	15854	100%

Source: Census 2011 CBS

According to table no 4.2, most of the people lived in this ward are Hindus i.e. 96%, Buddha 1%, Islam 2% etc. This table shows that most of the people follow the Hindu religion.

#### 4.4.3 Population by Mother Tongue

**Table 4.3: Population distribution by mother Tongue**

Mother tongue	Population	Percent
Nepali	7768	49%
Magar	159	1%
Tharu	7134	45%
Gurung	159	1%
Awadi	476	3%
Others	159	1%
Total	15854	100%

Source: Census 2011 CBS

According to table no. 4.3, large percent of people's mother tongue is Nepali i.e. 49% and 2nd large percent of people's mother tongue is Tharu i.e. 45%. Similarly 1% people's mother tongue is Gurung and Magar, 3% people's mother tongue is Awadi and 1% other mother tongue.

#### 4.4.4 Source of Firewood

**Table 4.4: Source of Firewood**

Source	Household	Percent
Private Forest	150	5.17%
Community Forest	2270	78.3%
Leasehold Forest	50	1.72%
Government Forest	399	13.76%
Others	159	1.05%
Total	2899	100%

Source: DDC report 2015.

From the above table, the community forestry is the main source of firewood where 78.3% household is dependent on it. Second higher percentage i.e. 13.76% households depending on the governmental forestry and from leased forestry 1.72% household utilize it whereas 1.05% others.

#### 4.5 Present Status of Community Forestry

The current community forestry policy revolves around the concept of forest user group. The concept of those who protect and manage the forest may also utilize its product (MPFS, 1998). A forest user group consists of all members of a community that regularly use a particular area for collections of forest product and grazing or who have been using and managing traditionally on areas of forest. So, the current policy has been to give responsibility and authority to local people by forming forest user groups to product, manage and

utilize the forest product. People on their own decisions and operational management plan regulate the management of the forest. As such the countries community forestry policy has been recognized as one of the most progressive forest policies in the region because it empowers local communities to manage forest resources. The latest documentation in forestry department has shown following table:

**Table 4.5: Required Community Forestry Distribution**

Development region	No. of FUGS	Total CF areas (hector)	No. of HHS
Eastern development region	2,649	330,966	326,824
Central development region	3,355	262,371	401,553
Western development region	3,834	182,521	430,514
Mid-western development Reg.	2,594	288,141	288,309
Far-western development Reg.	1,957	161,995	207,481
Total	14,389	1,225,993	1,654,529

Source: Department of Forest, 2013 GON

Table 4.5 shows that there are 1225993 hectors forest area that has been already handed over to 14,389 forest user group where the total involvement of the households in 1654529.

From regional perspective, Eastern Development Region consists of 2,649 FUGS, 326,824 HHS with total handed over CF area in 330,966 hectors. Similarly, Central Development Region consists of 3,355 FUGS, 401,553 HHS with total handed over CF area in 262,371 hectors while Western Development Region consist of 3,834 FUGS, 430,514 HHS with total handed over CF area is 182,521 hectors. In the Mid-Western Development Region, there are 2,594 FUGS and 288,309 HHS with total handed over CF area is 288,141 whereas in Far-Western Development Region there are 1,957 FUGS, 207,481 HHS with total handed over CF area is 161995 hectors. The study is to know the well being of the farmer. The study area has good land for the cultivation.



There is no problem for the irrigation. The main crops are rice, wheat, maize, potato, barley, millet, mustard etc. People are being attracted towards cash crops and unseasonable vegetable, but the agricultural sector is still trapped with the traditional system. Farmers are using chemical fertilizer and pesticides blindly. Apart from this, some people are engaged in other occupation such as trade, industry and service. The occupational distribution has been given in the table..

#### **4.6 Forest User Group: National Profile**

Community Forest User Group (CFUGS) are autonomous institutions, empowerment under the forest Act 1993 to manage and utilize their community forests under the guidance of an operational plan, which they develop, by themselves. CFUGs, choose and executive committee to made daily decisions on their behalf. Women have occupied about twenty four percent of the total members in the executive committee. Out of the total number of 14,389 FUGS, about five percent of the FUGS have only women as its members women CFUGS which are totally managed by women are well managed as compared to those administered by men or mixed. The number of households in CFUGS varies from 5 to 4750 an average being 115 households per group studies have shows that CFUGS of smaller size are more successful than the larger ones, it is estimated that about thirty five percent of the total population of the country is benefited from the CF program, Table 4.9 shows the national profile of community forestry program in Nepal.

**Table 4.6: National Profile of Community Forestry**

Total area of the community forest handed over	1225,993 (hectars)
Average size of the community forest	88.03 hectars
Total number of CFUGS	14,389
Total number of households involved	1647.444
Average size of executive committee	11.25
Average size of community forest user group	115HH
Average number of women in community	4.03
Percent of women in the community	24.85
Number of women only CFGS	648

Source: CFD database, 1 June, 2013

CF program has played a vital role in the economic and social life of the people. However, there is a lack of empirical evidence of its contribution in rural livelihood impairment a national level. (Banko Jankani, 2014:19)

#### **4.7 Introduction to Gairakhali Community Forestry**

Gairakhali Community forest is located in Tulsipur Municipality ward no 5, 6 and 9 and has been considered one of the best FUG in Tulsipur Municipality. This community forest is largest community forest of Dang district. The total area of this community forest is 1486 hectars. The district forest office handed over this forest to the FUG in the fiscal year B.S 2052. This community forest lies 44/45 km way from district headquarter. There different sort of trees like Sal, Sallo, Sisau, Khayar, Kusum Bakaino etc are found.

The total number of households in the FUG is one thousand seventy five. The households are mainly form Tharu caste, few from Brahmin, Khadka, Khatri, Bodi, Magar, Gurung and kami. etc. The FUG consists of an executive handed by Mr. Dadhi Bahadur Pandey. The chairperson is eight passed with 14

members including four women, three representative form watchers. The local leader old generation has accepted to be an advisor in the committee. Many members of the executive committee are educated. The FUG has already crossed first phase of five years.

The FUG has hired three watchers providing a Salary of 1500 per month since the FUG is headed by a member it has carried out appreciating works with the FUG fund, the FUG has carried out extension activities e.g. wall painting, wall pestering and fixed of hoarding boards related to forest protection. The FUG has carried out these actions within the district headquarter and on the way to their village. Because of there extension activities, the FUG is not facing any problem of forest fire in the community forest.

Similarly, the FUG has subsidized the price of the timber for the poor members. The FUG is providing timber at the cost of RS. 250/- for one room construction where as the others are paying Rs. 500/-. The FUG has also collected Rs. 104491/- per year for the community development and welfare the poor member and total income of CF is going to be deposited in the bank with an account name of Gairakhali Community Forest Development Fund.

## **4.8 Some Information of Study Area**

### **4.8.1 Demographic Characteristics of FUGs.**

These wards have total number of population is 6448 with an average family size of 5.5 per household. Currently, these wards have 1092 households. About 49.19% of the population is male and 50.8% is female. Female is more than that of the male population due to higher birth rates of female children (census 2011, CBS)

#### 4.8.1.1 Population Distribution by Age Group.

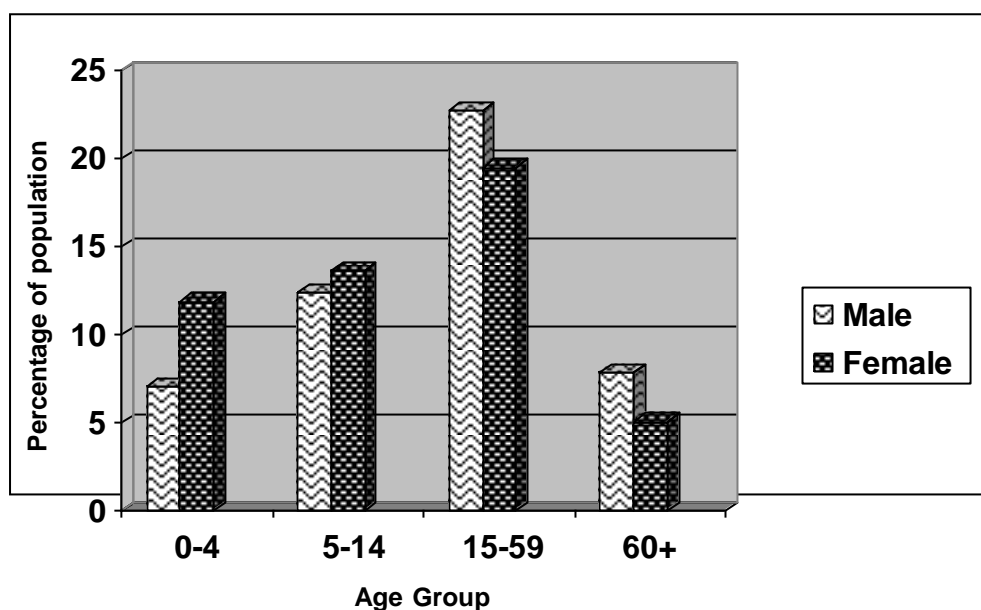
**Table 4.8: Age and Sex Composition**

Age group	Male	Percent	Female	Percent	Total pop.	Percent
0-4	457.16	7.09	765.37	11.87	1222.53	18.96
5-14	796.97	12.36	880.15	13.65	1677.12	26.01
15-59	1464.34	22.71	1254.78	19.46	2719.12	42.17
60 +	504.87	7.83	326.26	5.06	831.13	12.89
Total	3172	49.19	3276	50.81	6448	100

Source: Field Survey, 2015

It shows that out of total population of 6448, 44.97% are infant and children (up to 14 years), 42.17% are economically active (15 to 59) and 12.89% are old. Dependents are children and old and their percentage is (18.96+26.01+12.89 i.e. 57.83%). Age and Sex distribution are also seen following diagram.

**Diagram 4.1 Populations by Age Group**



#### 4.8.1.2 Ethnic Composition

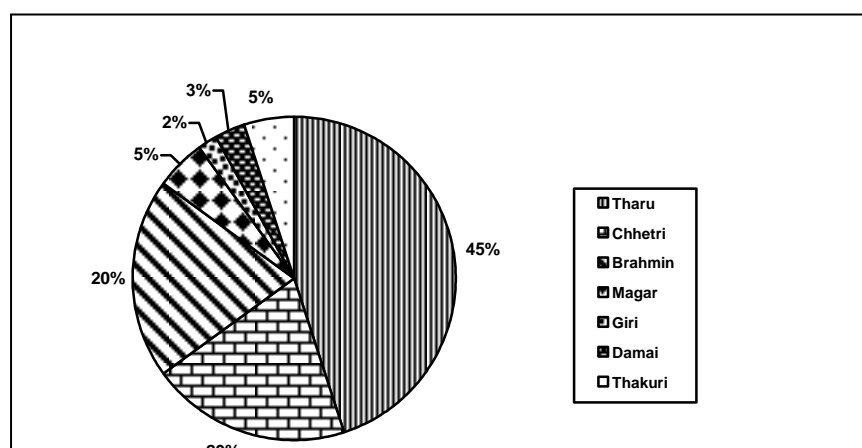
**Table 4.9: Ethnic Composition of the Sampled Household**

Ethnic Group	No. of households	Total population	Total %
Tharu	80	522	45%
Kshetri	43	232	20%
Brahmin	44	232	20%
Magar	8	58	5%
Giri	5	23	2%
Damai	5	35	3%
Thakuri	15	58	5%
Total	200	1160	100

Source: Field Survey 2015

The villages where forest users have been living are inhabited by various ethnic groups. Table no.4.9 shows that out of total 200 sampled households are from the ethnic group of the communities. Tharu is the dominant ethnic group which covers 45% (80 HHS and 522 population followed by kshetri and Brahmin which covers 20% of total households (43 HHS, 44 HHS and 232 populations). Magar and Thakuri 5% (8 HHS, 15 HHS and 58 populations), Damai 3% (5 HHS and 35 populations) and Giri 2% (5 HHS and 23 populations) we can be clearer by following Diagram.

**Diagram 4.2: Ethnic Compositions**



#### 4.8.1.3 Family Size

**Table 4.10: Average Family Size by Ethnic Groups**

Ethnic group	Household	Population	Average Family Size
Tharu	80	522	6.5
Kshetri	43	232	5.5
Brahmin	44	232	5.5
Magar	8	58	7
Giri	5	23	4.5
Damai	5	35	7
Thakuri	15	58	4
Total	200	1160	$40 \div 7 = 5.5$

Source: Field Survey, 2015

Family size affects the economic health condition and condition of the family. The average family size of the sample HHS (Households) is 5 persons which is slightly equal to national average (5.44 persons) household. Thakuri have the smallest family size of 4 persons per household and Magar & Damai have the largest family of 7 persons per households.

#### 4.8.1.4 Sex Ratio

Each and every society of Nepal is the mixture of Ethnic Diversity. There are so many casts and ethnic groups in the study area like Tharu, Chhetri, Brahmin, Magar, Newar, Tamang, Sarki, Damain, ect. The table has given below represents the ethnic composition of the study area.

**Table 4.11: Sex Ratio by Ethnic Groups**

Ethnic Group	Ratio
Tharu	122.23
Chhetri	120.2
Brahmin	109.79
Magar	103.63
Giri	106.25
Damai	108.95
Thakuri	119.57
Total	112.94

Source: Field Survey, 2015

$$\text{Sex Ratio} = \text{No. of male} / \text{no. of female} \times 100$$

The numerical measurement of sex composition of population is often expressed in terms of sex ratio. The sex ration is generally calculated as number of male per hundred females. It is computed for different ethnic groups and is given in above table no. 4.11 of all the ethnic groups sex ratio of Magar ethnic group is lowest (103.63) where as that of Tharu ethnic group is highest (122.23), Chhetri (120),Thakuri (119.57), Brhamin (109.79) Damai (108.95), Giri (106.25) respectively. The sex ratio is unusual.

## 4.9 Socio Economic Characteristic of User Group

### 4.9.1 Occupational Composition

The primary resources of a country are utilized on a commercial scale when a country is industrial and when the new technologies are introduced. It generates diversification of occupational structure. Due to the lack of these factors, there are no alternative opportunities which are non agricultural sector for employment in Nepal.

**Table 4.12 Sample Population Distribution by Occupation**

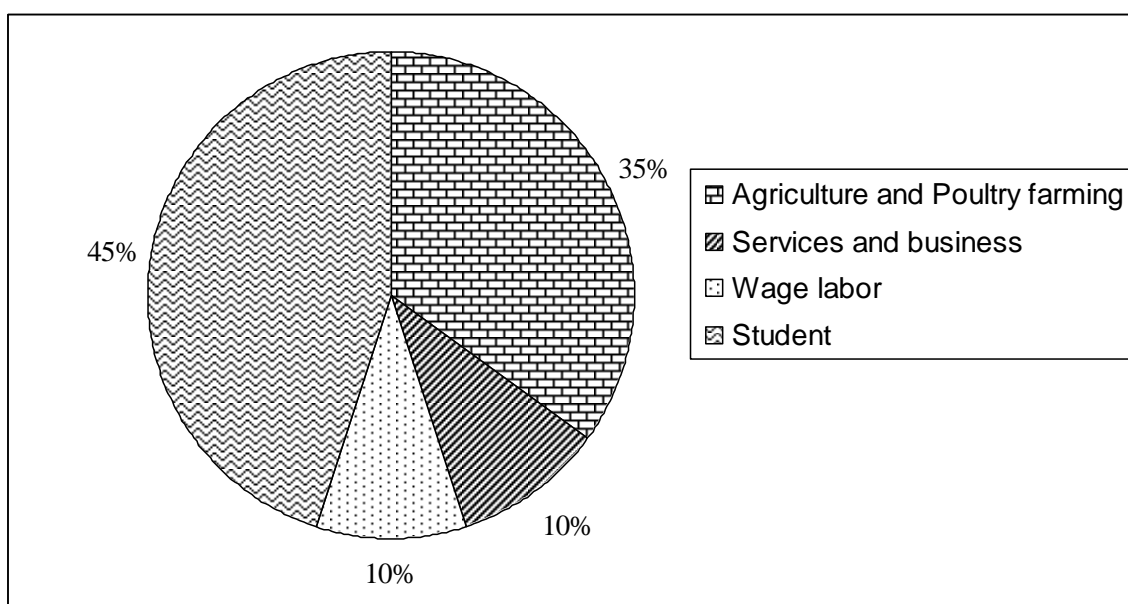
Occupation	Population	Percentage of Total Population
Agriculture and Poultry farming	2257	35
Services and business	643	10
Wage labor	643	10
Student	2905	45
Total	6448	100

Source: Field Survey, 2015

According to the above table, agriculture is main occupation of the people of sample households 42.17% of total economically active population excluding students is directly involved in agriculture and poultry farming. But poultry farming is just a partial occupation. So, agriculture is the main occupation (35%) of the population of the study area. Only, 643 persons are engaged in wage labor, respectively. It is shown in the follow in the following pie chart.



**Diagram 4.3: Population Distribution by Occupation**



#### 4.9.2 Educational Status

In this study, the educational status has been classified into five groups. They are:

- i. Illiterate
- ii. Literate
- iii. Primary
- iv. Secondary
- v. Higher secondary

The educational status of CFUG is tabulated in table no. 4.14.

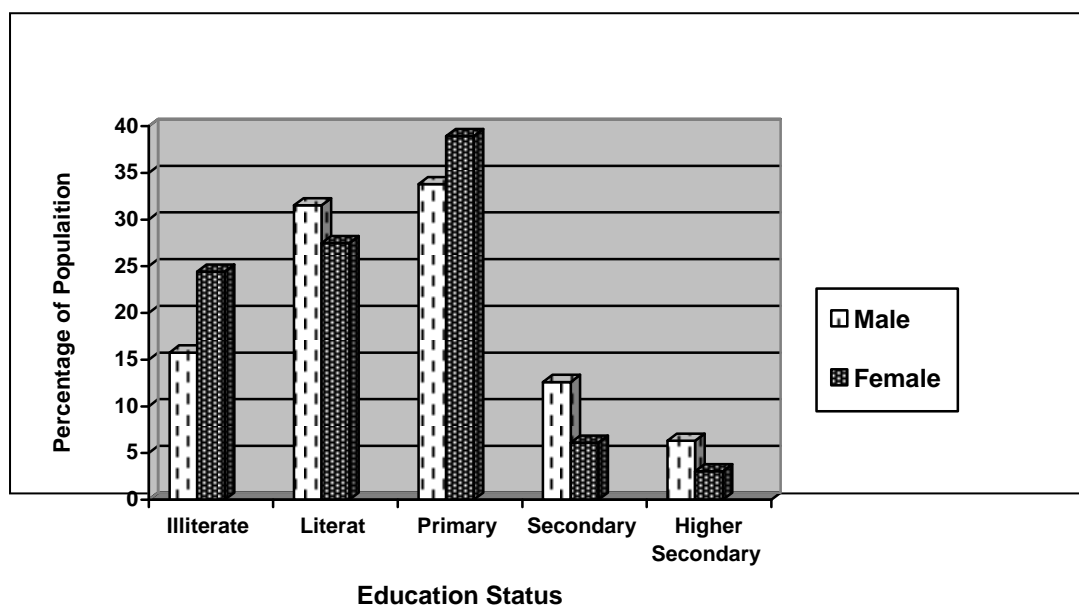
**Table 4.13: Educational Status According to Sex**

Level	No. of Female	Percentage	No. of Male	Percentage	Total	Percentage
Illiterate	800	24.42	500	15.76	1300	20.09
Literate	900	27.47	1000	31.52	1900	29.49
Primary	1276	38.94	1072	33.8	2348	36.37
Secondary	200	6.10	400	12.61	600	9.35
Higher Secondary	100	3.05	200	6.3	300	4.67
Total	3276	100	3172	100	6448	100

Source: Field Survey; 2015

The present survey, which is given by above table depicts that 1300 persons (out of 6448) 20.09% are illiterate out of which male are 500 (15.76%) and female are 800 (24.42%). The numbers of literate are 1900 (29.49%) out to total population among which male 1000 (31.52%) and female are 900 (27.47%). All together 2348 people have received primary education which is 36.37% of total population among which the male are 500 (15.76%) an female are 800 (24.42%). And 600 persons (9.35%) have got secondary level of education among them 400 (12.6%) are male and 200 (6.10%) are female. Being the availability of college in the district and out of district 300 peoples have received higher education which is 4.67% of total population among whom 100 are female and rest are male. The overall literacy rate is 80% or more than 65% which implies that the majority of the people of the study area being educated which shown in the following diagram.

**Diagram 4.4: Educational Status According to Sex**



4.9

### .3 Distribution of Livestock Holding in the Sample Households.

Livestock is one of the important occupations of Nepalese people for getting milk, meat, manure, ghee, eggs and ploughing etc livestock is considered as a liquid asset as it can easily be converted into cash by selling them when there is

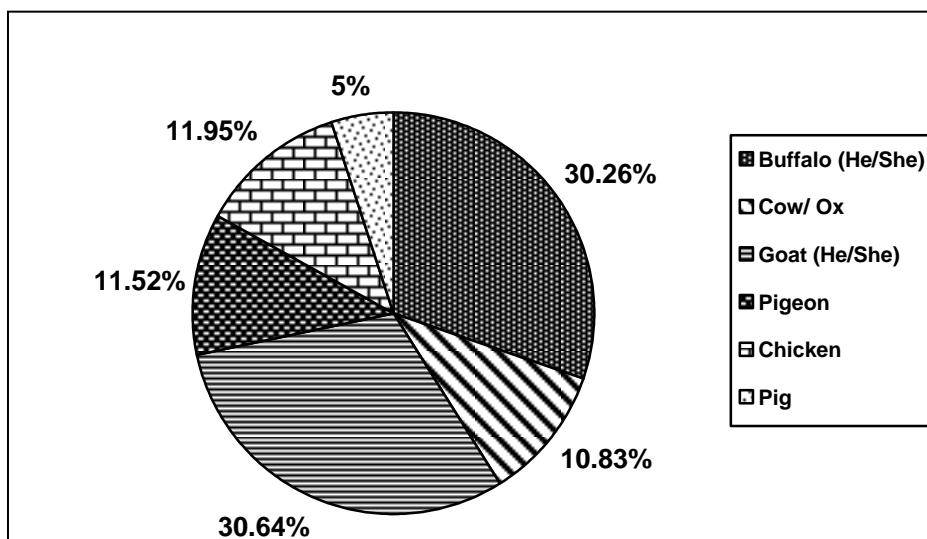
a money crisis in the house. Table 4.13 and diagram 4.4 show the total number of livestock holding at present in Gairakhali CFUG.

**Table 4.14: Distribution of Livestock Holding in Gairakhali CFUG**

Types of animals	Average no. per HH	Percentage
Buffalo (He/She)	2.38	30.26
Cow/ox	1.23	10.83
Goat (He/She)	2.35	30.64
Pigeon	0.88	11.52
Chicken	0.93	11.95
Pig	1.0	5.0
Total	8.77	100.00

Source: Field Survey, 2015

**Diagram 4.5: Distribution of Livestock Holding in Gairakhali CFUG**



Above table and pie chart shows the buffalo and goat have occupied the highest percentage of livestock i.e. 30.26 and 30.64 respectively and other livestock cow ,pig, chicken have less. It shows the most of the households are able to use of community forest and they are getting beneficiary from this

programme. Basically, women are involved in such kind of activities because in the study area men engaged in high income sources like abroad, business etc.

#### 4.9.4 Feeding Pattern of Livestock.

Some people of the sampled households keep their livestock by stall feeding and some people take their livestock for grazing. Table 4.15 shows the feeding Patter of livestock in the user groups.

**Table 4.15: Feeding Pattern of Livestock in Gairakhali CFUG.**

Feeding pattern	No. of HHS	Percentage
Stall feeding	50	25
Grazing	150	75
Total	200	100.00

Source: Field survey, 2015

The above data shows that 25% households practice stall feeding while 75% households go for grazing.

#### 4.9.5 Distribution of Land Holding

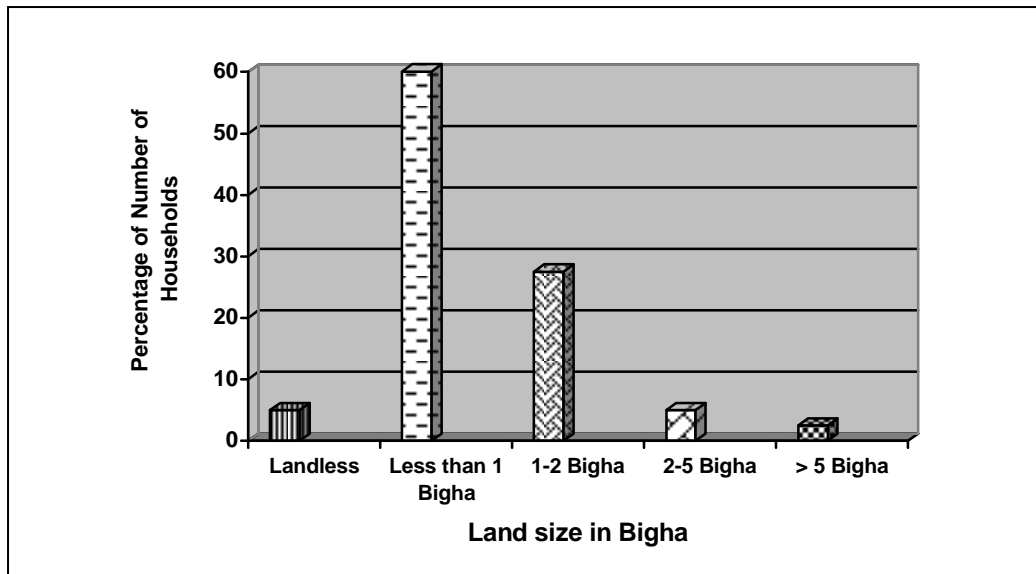
Land holding is one of the most important determinants of the income and food sufficiency of the people. More than 80% households have land for paddy cultivation but not sufficient. Some of people plough other's land as tenants and some people have to spend their income for purchasing rice. Table 4.16 and diagram 4.6 show average land holding pattern of sampled household.

**Table 4.16: Distribution of Land Holding Pattern in Gairakhali CFUG.**

Land size in Bigha	No. of HHS	Percentage
Landless	10	5
Less than 1 Bigha	120	60
1-2 Bigha	55	27.5
2-5 Bigha	10	5
> 5 Bigha	5	2.5
Total	200	100.00

Source: Field Survey; 2015

**Diagram 4.6: Distribution of Land Holding Pattern in Gairakhali CFUG.**



From the above table and diagram, it is clear that 10 households have not their own land and most of the households have less than one Bigha land. It shows that the economic status is not so poor of the people living there.

After the seeding of community forest, agricultural activities have been increased by which people are getting extra income from agriculture. Ten main crops produced in this area are paddy, wheat, maize; potato etc. farmers have been attracted towards vegetable production. Cauliflowers, cabbage, Radish, carrot, tomato, Rayo-sag, garlic, are some remarkable vegetables produced in this area. Before community forestry, people used to make dung cake for fuel, but after community forestry, the number of animal husbandry has been increased and manure for the agricultural purpose is enough. People used to buy vegetables for daily use before community forestry but now they can sell vegetables. Thus, vegetables production is the extra source of income.

## **4.10 Benefits of Community Forest in Study Area**

According to the nature, stage and level of involvement and location in the forest management system, the benefit of community forest are identified below.

### **4.10.1 Benefits on Households**

These types of impact could be measured in terms of time saving, to collect fodder, fuel wood, grass leaf litter and other through it. During the research period in the field, researcher found that more than 20 percent time being saved nowadays. Before the introduction of CF, people had to work about one hour to collect forest product even for leaf litter. Now, they can collect one Bhari leaf litter or fodder in 20 to 30 minutes from their forest. It helps to engage them in fulltime (i.e. 10 am to 6 pm) in their agriculture and business work which has direct positive impact on economic aspect.

### **4.10.2 Unification of People**

Mechanism of encouraging and forming users group committee, thus, building up social capacity for rural development. After the establishment and unification of the community forestry, people are united to face every type of social problems through mutual cooperation.

### **4.10.3 Reduction of Women's Work Load.**

In the Nepalese context, women's daily lives are directly connected with food, fodder and fuel wood. Thus, women are the main member of the family who take care and decide the household works. They are busy whole day and their work load is generally much higher than man for the purpose of collection of grass, water and wood for fuel for that they have to walk longer distance. Therefore, respondents are asked to evaluate whether women are benefited from CF in terms of reducing of work and has been decreased after the implementation of CF. Accounting to the respondents and women group discussion indicates that before the implementation of CF sufficient forest

products are not available in the nearby forest due to its deforestation therefore, they have to spent 1-2 hours to collect one head load of forest production.

#### 4.10.4 Source of Energy

The villagers of the study area are depended upon firewood as main source of energy. Out of 200 samples, 180 households have the firewood as main sources. There is some practice of using alternative source of energy like biogas, kerosene and electricity.

**Table 4.17: Source of Firewood.**

Source of firewood	Firewood (in Bhari)	Percentage (%)
Community forestry	2000	50.6
Private forestry	1500	42.5
Other source	720	6.9
Total	4220	100.00

Source: Field Survey, 2015

\*Bhari = 20-25 kg.

The above table shows that the annual consumption of firewood sampled household is about 4220 Bharis. Where the contribution of the community forestry to fulfill the total demand of firewood is more than 50.6 percent and other demand was fulfilled from the private forest more than 42.5 percent and other sources like agriculture residues which is 6.9 percent.

#### 4.10.5 Source of Fodder for Livestock

Forest is the source of bedding grass and fodder for animals. Gairakhali forest is providing enough grass and fodder for the animals. Most of the household of the study area domesticate both animals and birds. They rear animals and birds on the basis of agricultural, religious and economic values depending upon the kind of animal. Animal husbandry is supportive to make compost manure at the local level and is more useful to agriculture. Gairakhali forest has positive impact towards animal husbandry. The number of animal and production of milk, and meat is increasing gradually.

The table shows the source of fodder for livestock below:

**Table 4.18: Source of Green Grass and Fodder**

Source	Average utilized green grass (in Bhari)	Per Bhari price/total market price	Average utilized fodder and straw in Bhari	Per Bhari price/total market price.
CF	5760	Rs. 11520	1600	Rs. 5/8000
PF	1100	Rs. 10/1100	1000	Rs. 10/10000
G	1000	Rs. 25/25000	1400	Rs. 30/42000
Total	7860	Rs. 47520	4000	Rs. 60000

Source: Field Survey, 2015

Here, CF= Community Forest

PF= Private Forest

Ag= Agricultural Residues

The sample household rely on community forestry an agricultural residues. The above table shows that 5760 Bhari of green grass has been obtained from CF and the rest of the demand is fulfilled by PF (1100 Bhari) of agricultural residues (1000 Bhari). Similarly, out of the total demand of fodder and straw, CF has fulfilled 1600 Bhari by agricultural residues.

#### 4.10.6 Source of Timber

The table shows the situation of timber demand of study area below;

**Table 4.19: Total Demand of Timber**

Source	Timber cu. ft.	Market price	Total income
Community forestry	1500(75%)	Rs. 100	Rs. 150000
Private Forestry	200(10%)	Rs. 100	Rs. 20000
Other source	300(15%)	Rs. 100	Rs. 30000
Total	2000cu.ft.		Rs. 200000

Source: Field Survey, 2015



The above table shows that the source of timber. This table shows that the main source of timber in CF. it has fulfilled 75 percent demand of timber out of total demand where as private forests of other sources have fulfilled 10 percent and 15 percent demand of timber, respectively. There is annual demand of 2000 Cu.ft. Timber of about Rs. 200000 to its consumers.

#### **4.10.7 As a Source of Resources**

Peoples are mainly dependent on agriculture directly or indirectly because of predominance of agrarian base economy in our country and so are in the study area. There are 35 percent people are engaged on agriculture. It is very necessary to uplift the condition of agriculture. Uses of modern technology and fertilizers have to raise the level of income. The CF has helped to provide the source of watershed to irrigate land and to yield more production in the village.

#### **4.11 Perception in Management Committee**

During the period of observation in the study area, the researcher could get so, much information from the management committee member of SCFUG. In this section, the information obtained from the management committee on various aspects of CF, which is analyzed.

##### **4.11.1 Income Source of Community Forestry of Gairakhali User Group**

The CFUG has been generating income from various activities, such as selling of forest product, penalties entry fees or membership fee and functional levy. In this CFUG the interest obtained from the loan to the poor people. They have not collected the money from the donation from outside. Therefore, above all the activities help to increase the fund which is a good scope to do so far many FUGS.

**Table 4.20: Income Source and Fund of Gairakhali CFUG**

Source of income	Amount	percent
Penalty	RS. 27139/	14.35
Membership	Rs. 19570/-	10.70
Interest	Rs. 2070/-	1.13
Forest Product Sale	Rs. 91,225/-	49.92
Entry Fee	Rs. 42730/-	23.38
Total	182,734	100.00

Source: Field Survey, 2015

According to above table last year income of Gairakhali community forestry has been shown above Rs. 27193 or 14.85 percent was acquired from penalty. If cow and buffalo are strayed the amount of penalty is Rs. 20 and is goat and sheep Rs. 10 per animal. The forest products looters are penalized Rs. 50 to Rs. 1000 according to the nature of crime which they had done. Similarly, Rs. 19570 or 10.70 percent revenue was gained from membership. The member has to renew his or her membership Rs. 10 per household per year. New member should pay Rs. 50 with application. From the interest Rs. 2070 amount should be collected. Not only this, the greatest revenue of CF is achieved from the selling of forest product Rs. 91225 or 49.92 percent fund was collected too. Similarly, this CF is achieved Rs. 42730 or 23.38 percent from entry fee. Hence, the total income of Gairakhali community forestry product was Rs. 182734 in last year.

#### **4.11.2 Main Source of Income of CFUG:**

##### **A. Timber**

Timber products are generally divided into two groups: construction timber and smaller products that are used for making agricultural implements. The village people require construction timber only when there are a loss of houses through

earthquake, fire or landslides and expansion of the family unit. Moreover timber from community

forest is used only when the private resources is insufficient. Timber for the making of agricultural implements (e.g. plough, tools handle) is required.

### **B. Fire Wood**

Fire wood is the major and direct income source for user groups. In this village, almost 90 percent households are joined to carry out fire wood in each year. In this community forest, every Saturday is allowed to cut the fire wood. They can participate after paying some fee as a levy. Each household can collect an average 15 Bhari fuel wood per year. They have to pay the money per Bhari Rs. 2. In this way, they have been collecting all the money in the fund.

### **C. Green Ground Grass**

It is a kind of source for earning income to the CFUG. When there is restriction for grazing animals, the grass grows up.

The CFUG area is opened for collecting grass from Ashoj-Manshir. During this time, some needy users to collect two Bhari grass perday for their livestock. The household can carry out the grass during opening time within little charge.

### **D. Fines and Penalties**

Penalty is another source of income of community forest. As per the rules and regulation user is not allowed to carry out any product like firewood, grass, leafing litter etc. without prior permission, these activities are strictly prohibited. If any user violates the rules, they are Penalized and subjected to a fine as prescribed and approved by themselves. One who delays the renewal of membership is also charged penalties.

## **E. Membership Fee**

The FUG has fixed some amount of the membership fee. In order to acquire the products, it is necessary and compulsory to be a member of particular community forest. If any new user he/she will have to submit application for the membership with the charge of membership fee. However, the membership will not be opened for all non-users of the forest.

### **4.11.3 Income Generation Program by Using Community Forestry Loan**

The Gairakhali Community Forestry has nearly Rs. 200000 fund in Gairakhali community forestry account. From the fund, the CF has conducted both community development program and provide loan to user groups in income generating activities. The Gairakhali community forest management group invested its income in two ways. In one hand, it has invested in social sector such as to help school, temple, rural road, drinking water etc. and on the other hand, it has invested its fund as a loan among user group to generate income i.e. poultry, farming, cow/ buffalo farming etc.

**Table 4.21: Loan Invested in Different Income Generating Activities.**

Sector	HHS	Percent
Goat	26	32.09
Poultry	5	6.17
Buffalo	10	12.34
Vegetable	40	49.38
Total	81	100.00

Source: Field Survey, 2015

According to above table the community forestry has given each to user group to develop their income generating program. 81 HHS are benefited by such types of program. The huge number of household i.e. 40 HHS have taken loan from CF for vegetable farming. Similarly, 26 HHS are taking loan from CF for

goat/sheep farming, 10 HHS have invested their loan in Buffalo and cows rearing. Lastly 5 households are utilizing their loan in poultry farming.

#### **4.11.4 Major Area of Expenditure**

The area of expensed are divided into four namely natural capital development, human capital development, physical and social capital development and administration. Natural capital development includes forest management cost. Human capital development includes training and skill development cost. Physical and social capital development includes community infrastructure development cost as well as other investment on income generation activities and support to disaster. Forth category administration cost includes administrative expenses. Forest management includes wage and seeding cost related to forest management activities (nursery, tree planting, harvesting cost, thinning etc.), remuneration to watchman and other expenses for material purchases related to the forest management administration expenses stationary and office supplies and audit cost. The physical capital and social activities includes the community infrastructure development such as funding to sanitation drinking water, construction of community Chautari and other expenses related to community welfare.

**Table 4.22: Amount Invested in Different Asset in FUG (2063-2064)**

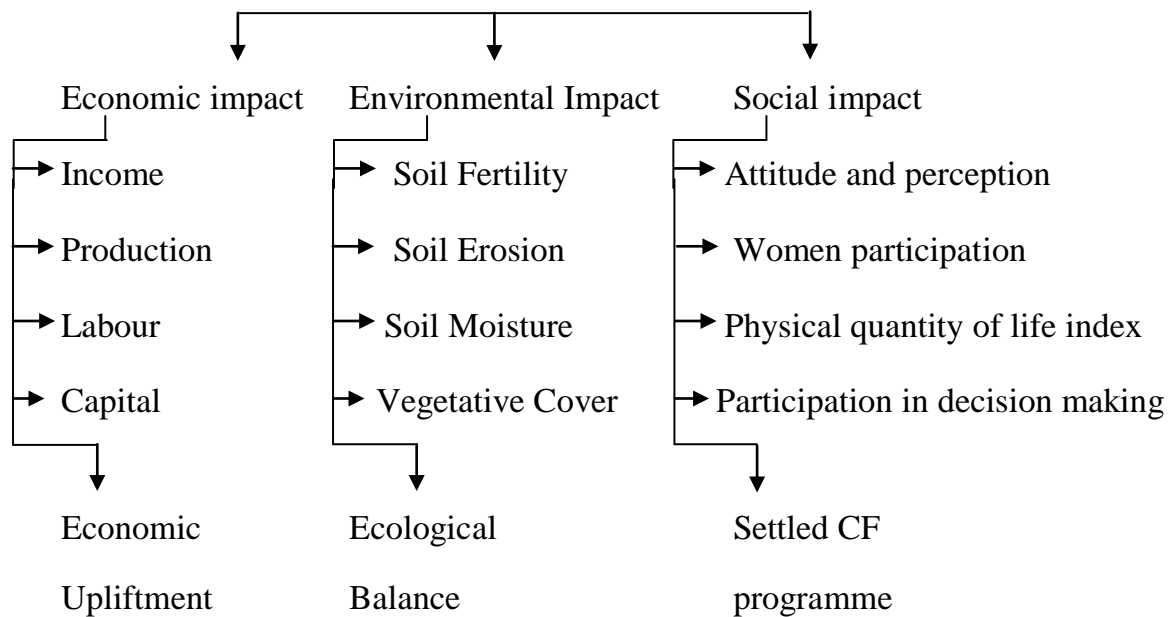
Major Area of Expenditure	Amount in NRS	Total Amount NRS	% of investment of Total income	Rank
1. Natural Capital forest management				
a. Nursery	2450	5550	3.03	IV
b. Tree planting	3100			
2. Human capital (training and skill)	12509	12509	6.84	III
3. Physical/social capital development				
a. construction of Chautari	2000			
b. Village road.	40000	72000	39.40	II
c. Construction of school	3000			
4. Administration cost				
a. Renew membership fee	835			
b. Purchase of register	500	92675	50.71	I
c. Purchase of stationary	500			
d. Salary of Staff	90840			
Total investment	182734		100.00	
Total income	182734			

Source: Annual Report of FUG 2010.

The above table shows that, the income of CF has been utilized in its proper purpose. Most of the income is utilized in this administration cost. Except this international cost, large amount of income of CF i.e (39.40%) has been invested in social welfare that is construction of road, school, and other similarly, it has been invested in Human Capital. That 6.84 percent of income has been invested in Human Capital. At last 3.03 percent of income of CF has been invested in Natural capital forest management. Hence, the largest share of investment in made for administration cost, and them physical/ social capital development than other expense.

## 4.12 Effects of Community Forestry

Flow Chart 4.1: Community Forestry System



Community forest has 3 sorts impact as shown in the above figure viz. Socio-economic impact, environmental impact and social impact. By economic impact, the source of income will increase production rate which in turn, increased the labour supply. Finally, capital will be formed, thus the whole process ultimately invites economic upliftment of FUGS.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.1 Summary of Major Findings

The study summarized with the objectives of identifying to analyze the importance of community forestry in the local economy. It is found that there is positive impact of community forest on use group. Such impacts are revealed form of income generation, construction of social works, social overheads and awareness of people on the need for conservation of natural resources. The study has been also designed to review the policy statements and subsequent actions by the user group for sustainable forest development. Finally, it has been planned to analyze the aforesaid issues based on finding and suggest appropriate recommendations for future action.

The major findings obtained from this study are as follows:

1. CFUG'S provided some employment opportunity to poor users in the forest management.
2. In the study area, the main source of income of CF is timber and fuel wood which have been contributing 49.92 percent.
3. In the study area, it is found that male literacy is higher than female literacy.
4. In the study area, the main occupation is agriculture, so 80 percent are engaged in agriculture. In addition to agriculture, people are adopting different occupations to raise their living standard.
5. In the study area, most of the HHS (45%) is Tharus.
6. The CFUGS' provided timber to 40% poor household's user for their house construction and provided with addition timber to earn living for them.



7. Male plays the vital role in user's committee. Due to the lack of education, very few numbers of women to be involved in the user's committee. But in seminar and trainings, women are gradually participating.
8. The large amount of income (39.4%) of CF is invested in social overheads environment and income generation

## **5.2 Conclusion**

Community forestry program is the most prioritized program in the sector of forestry in Nepal. The program has been launched in Nepal since 1978. The research units Gairakhali community forestry was handed over to user group in 2052 B.S. The community forestry is largest community forestry of Dang district which takes 1486 hectares area. The user group of this community forestry are two villages (Mourighat and Neyagaun) ward no. 5,6 and 9. The user groups have made a head committee for execution. Agriculture is the main occupation in the area but some households are landless.

Community forest fulfills the wants of forest products like firewood, fodder, green grass, leaf litter, timber etc. required for day to day lives for villages. In this forest user group, forest products are distributed proportionately on the basis of household size. In general, its users perceive that they are getting an equitable share of the products currently available from their forest. Besides, the monetary benefits, the people of study area are being entertained the real benefits like co-operation among the people, environmental improvement etc. after the implementation of community forestry program.

## **5.3 Recommendations**

There are some recommendations for the maximum effective utilization of CF. these recommendations also show the implications in relation to the Gairakhali community forestry and similar forest user groups.

1. Government and non-government organization should be encouraged to work on community forestry based programs.
2. DFO should have regular interaction and meeting with FUGS, in terms of proper CF management.
3. The women and children are the main collectors of the forest products. So, they should be allowed to participate in all meetings and training related to forest. Their views are also to be incorporated.
4. The user's groups should receive training in community forestry. They should also visit other community forestry where the user's groups/committee is functioning with success.
5. Participatory, monitoring and evaluation system should be developed to assess their own work by the FUGS themselves.
6. Training program on operational plan preparation, forestry rules and regulations and awareness building should be conducted for all community forestry users group. For successful community forest program, the leadership training should be given to the leader.
7. Selling of timber and other forest products should be done through co-operatives of FUGS on the basis of competitive price.
8. Need plantation of NTFPS and fund should be mobilized for the users, especially by involvement of the poor and disadvantaged groups.
9. Improved cooking stove, kerosene stove, biogas program in the inner Terai can be carried out to reduce firewood consumption and improve health. DFO can coordinate with concerned agencies.
10. CFUG need to be supported and strengthened in institutional development aspect through different types of exposures such as field trips training and workshops related to decision making, fund management and overall group empowerment and capacity building.

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# QUESTIONNAIRES

Households Number:

Head of the Household:

Respondent:

Sex:

Name:

Occupation:

Educational Status:

Marital Status:

## ***1. Family structure and status***

a. Nuclear                      b. Joint                      c. Extended

Age                      Sex                      Education                      Total                      Remarks

0-9

10-19

20-29

30-39

40-49

50-59

60 above

## ***2. Land holding***

Land holding                      Khet                      Bari                      Pakho                      Other

0-1

2-4

5-10

11-20

21-30

31-40

41-50

50 Above

## ***3. Livestock***

Animal

Number

Buffalo  
 Cow  
 Goat  
 Sheep  
 Pig  
 Hen/Cock  
 Other

**4. Source of forest product**

- a. Personal forest
- b. Community forest
- c. Other

**5. Available of forest product from community forest**

- a. Timber
- b. Firewood
- c. Fodder
- d. Grass
- e. Leaf leather
- f. Bedding
- g. Other

**6. Major crops grown in the land**

S.N.	Major Crops	Production in Muri

**7. Do you go to forest for supervision? Yes / No**

**8. If yes, how many times do you go to the forest in a month?**

- a. 1
- b. 2
- c. 3
- d. 4 or More than 4

**9. How many times in a year the meeting convenes, normally?**

- a.1
- b. 2
- c. 3
- d. 4

**10. How many forest products are provided by Gairakhali FUG for one family in a year?**

**11. Is there any misunderstanding in the past in the distribution of forest product?**

**12. Do you think that community forestry is very useful?**

**13. Do you attend the assembly?**

**14. If yes why? If no why?**

**15. Do you have to say any more about community forest?**

**16. Do you send your children to school?**

a. Boy

b. Girl

c. Both

**17. Are you satisfied with the progress of this forest?**

**18. Do you use firewood for cooking?**

**19. From where do you get fodder?**

a. Community forestry

b. Government Forest

c. Private forest

**20. How much fodder do you need?**

**21. Do you use any other alternative energy resources besides firewood?**

**Use type**

a. Electricity

b. Kerosene

c. Cow dung

d. Dry Leaves

e. Bio-gas

f. Othe



