THE ROLE OF COMMUNITY FORESTRY IN SOCIO-ECONOMIC DEVELOPMENT
(A Study of Shiva Community Forest, Kawasoti, Nawalparasi)

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LETTER OF RECOMMENDATION

This is to certify that this thesis entitled **The Role of Community Forestry in Socio-Economic Development (A Study of Shiva Community Forest, Kawasoti, Nawalparasi)** has been prepared by **Danda Kumari Gurung** under my guidance and supervision. I hereby forward this thesis to the evaluation committee for final evaluation and approval.

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APPROVAL LETTER

The thesis entitled **The Role of Community Forestry in Socio-Economic Development (A Study of Shiva Community Forest, Kawasoti, Nawalparasi)** submitted by **Danda Kumari Gurung,** in partial fulfillment of the requirements for the Master's Degree (M.A.) in Sociology has been approved by the evaluation committee.
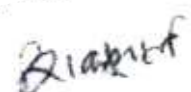
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DECLARATION

I hereby declare that the thesis entitled '**The Role of Community Forestry in Socio-Economic Development (A Study of Shiva Community Forest, Kawasoti, Nawalparasi)'** submitted to the Kumarwarti Multiple Campus, Faculty of Sociology, Tribhuvan University is entirely my original work prepared under the guidance and supervision of my supervisor. I have made due acknowledgements to all ideas and information borrowed from different sources in the course of writing this thesis. The results of this thesis have not been presented or submitted anywhere else for the award of any degree or for any other purposes. I assure that no part of the content of this thesis has been published in any form before.

Danda Kumari Gurung

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ABSTRACT

The study 'The Role of Community Forestry in Socio-Economic Development' has been carried out using primary source of data collected from Shiva Community Forest User Groups, Kawasoti, Nawalparasi District, where included 40 respondents.

The objectives of the study are as follows:

   i.   *To examine the socio economic condition of study area.*

   ii.   *To analyze the benefits derived by the user group from the community forestry.*

  iii.   *To examine the management system and utilization of community forest resource in the study area.*

Percent, distribution, frequency tables and cross tables are used to describe the role of community forestry in socio-economic development.

The Shiva community forest was found such as facility of to be playing a very crucial role for the betterment of poor and deprived group of people by implementing different kinds of poverty reduction programme such as facility of loan, timber with out charge, timber for natural disaster affected population, job for the poorest family etc. The user group is also doing different activities in terms of improving fertility of land conservation of forest for healthy environment, bio gas programme for the conservation of forest and women's heath as well as generating the income of the people through livestock rearing.

The SCFUG is also spending its fund for soil conservation, bridge construction, plantation etc. The people are being benefited by the SCFUG in two ways; on the one hand, they are receiving different facilities such as sustainable collection of forest products different forest products in nominal and discount rate. On the other hand less time consumption in forest products collection, healthy environment, social integrity, people's consciousness etc.

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LIST OF ABBREVIATIONS/ACRONYMS

CF	-Community Forest
CFUG	- Community Forest User Group
CPR	-Common Property Regime
DFO	- District Forest Officer
DNP	- Department of National Park
DNPWC	- Department of National Park Wildlife Conservation
DOF	- Department of Forest
FUG	- Forest User Group
FY	- Fiscal Year
HA	- Hector
HHs	- Households
HQ	- Headquarter
IGA	- Income Generating Activities
INGO	- International Non-Governmental Organization
IOF	- Institute of Forest
NGO	- Non-Government Organization
NTFP	- Non Timber Forest Product
PA	- Protected Area
PF	- Panchayat Forest
PPF	- Panchayat Protection Forest
SCFUG	- Shiva Community Forestry User Group
UCs	- User Committees
UGs	- User Groups
VDC	- Village Development Committee
WC	- Wildlife Conservation

<center>**CHAPTER-ONE**</center>

<center>**INTRODUCTION**</center>

1.1 Background of the Study

Forest is one of the most important natural resources for the developing countries. People use the forest for many purposes such as fuel wood, fodder timber, nuts medicine etc. It has been contributing to the social religious, cultural, economic and environmental sector from the early human civilization. Livestock rearing and forest sector have jointly contributed to the agriculture development of Nepal. As a whole the agriculture contributes 67 percent of total national income in average; the forest sector has occupied 25 percent of it. The role of forest to the development of human civilization and culture is worth remembering (Acharya and Oli, 2011).

In general, there are plenty of reasons to call community forestry in the world one of the most successful decentralized modes of forest community, but more attention needs to be paid to making forest user groups more equitable, inclusive and pro-poor in practice. The existing policies and legislation have provided a legal grounding for decentralization of forest management roles and responsibilities from the state to the local communities, but frequent unilateral governmental policy amendments make forest user groups skeptical about their rights. Now forest user groups must work to keep their autonomy in a changing political context; they need to find a way to become politically neutral, but committed to democracy and protection of the rights of forest users (DOF, 2010).

Over the last two decades, the institutionalization process of forestry de-centralization in Nepal has been adversely affected by unstable politics on the one hand and the techno-bureaucratic structure of forest departments on the other. In addition, the process has remained virtually dead during the last decade due to the Maoist insurgency and the resulting civil war in Nepal, which rendered the government almost non-functional at all levels. The existence of a

state within a state (the Maoist people's government and the Nepal government) during the insurgency period not only created difficulties for forest user groups in making decision at the local level about the management of forest resources, but also hindered the whole institutional process of forestry decentralization in Nepal. Hence many challenges and limitations in community forestry in Nepal are historically rooted in inconsistent policies, unstable broader political governance and a weak institutional structure. Without understanding the context and properly addressing issues beyond forestry, those committed to decentralization of forest governance in Nepal, even in the post-war situation, will not be able to achieve their desired outcomes.

Developing countries basically depend on agriculture. Most of the people in developing countries live in the villages. They fulfill their basic needs from the forest. To the forest dwellers, forests are primary source of construction materials, fodder for the livestock, food in the lean season and medicinal herbs (Fernands and Kulkarni, 2009).

Among the programmes of Nepal's forestry sector, community forestry programme has been accorded the highest priority. Essentially it is a participatory approach that has evolved over the last 25 years. Nepal's community forestry approach has been widely acclaimed as a successful forest management approach. Indeed the programme has resulted in rural farmers ginning increased access to forest resources, together with improvement in biodiversity and landscape values. To date, 1.1 million hectors of forest (about 25 percent of national forest area) has been handed over to more than 13000 Community Forest User Groups (CFUGS) involving 1.4 million households (35 percent of Nepal's total population).

The local people have conducted various types of income generating activities with the help of community forestry programme. It has made a positive impact to uplift the life standard of the women, poor and backward groups, the user groups have established fund by the income from the forest products, grant and

penalty. They are conducting various social and developmental activities such as road construction, helping to the school, drinking water supply in the local level etc. The community forestry has increased a progress in the livestock rearing which has resulted in increment of livestock production like milk, cheese, meat etc. and compost manure. It has increased the income of the local people. Similarly, in the districts like Humla, Jumla, Kalikot and so on, people have conducted the economic activities at the local level by the collection and selling of the herbs which they get from community forestry (Hamro Kalpabricha, 2010; P-5)

The first national workshop, which was held in 1987, provided valuable contributions to the development of master plan for forestry sector and the formulation of forest Act of 1993. The second National workshop held in 1993, focused on issues related to organization structure of the Department of Forest, bottom-up planning, human resources development, CFUG network, and involvement of non-governmental organizations (NGOs). This workshop emphasized the need for Regulations of 1995. The third National workshop, which held in 1998, was an instrument in developing the national vision of community forestry and identified the roles of different shareholders in achieving that vision. The fourth National workshop went one step ahead by focusing on emerging issues related to poverty reduction through community forestry.

Nepal's C. F. (community forestry) programme has proved to be a very encouraging effort in the development of partnership in forestry between farmers and government (Mathat, 2008) in the recent year. Forestry legislation and policy are being refined and there is a gradual shift of CFUGS from subsistence to monetized market economy. CFUGS are getting increasingly involved in income generation, poverty reduction, local development activities and employment creation. Different projects such as CFUGS and district forest offices (DFOs) are working side by side to improve the living standard of the poor people and for the local development. These people based activities have

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many positive impacts. On the one hand it has helped to conserve the forest and on the other hand it provides source for rural development. The fund generated from the forest can be used in various activities such as watchers' salary, donation for the construction of road, school, river dam, health centre and also the donation for solving the problem of local drinking water, irrigation, electricity, telephone service etc.

Community forestry is a kind of system in which the local people are all in all for its preservation, promotion, management and utilization. In doing so consumers committee is formed out of the total members who belong to it. It is responsible for handling its activities like preserving, managing, planning for its protection, development and so on. In addition, its certain percentage of the 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 forestry is a small scale village level forestry practice where decisions and actions are often made on the collective communal basis and where the moral population participate in planning. Establishment of management and harvesting of forest crops and receiving a major proportion of the socio-economic and ecological benefit from the forest conceptually community forestry can range form pure forest cropping one extreme to combining tree and food crops agro-forestry on the others (Kayastha, 2004)

The most recent approach in forestry has been the introduction of community forestry or social forestry. Essentially, it is a participatory approach under this programme people are involved in planning, implementing and decision making in all aspects of forest management, development, and production and projection. Poverty reduction is a major concern at global level and is explicitly spelled out in the Millennium Development Goals (MDGs) of the United Nations.

Community forestry activities are based on the intimate relationship between farming system and the forestry areas. It provides various things like fuel,

fodder and building material etc. for the villagers. In this context, aims of present study of the study area are to find the conflict between the forest policy and user group, it's management system utilization and peoples participation in management of community forest.

This research attempts to find out the activities and experience of the users in linking CF into community development and to identify the role of community forestry for community development and poverty reduction, using the forest resource. The sustainability of CF does not depend only on the formation of CFUGs and handing over the resources but also the effective mechanism of handling the resources. The absence of a mechanism for an effective monitoring and regular improvement in CF castes a serious doubt on the long term possibility of the groups as well as the overall sustainability of CF. Therefore, this research aims to understand what are the activities and experiences of the users in integrating CF into community development and to identify how community forestry could help in community development along with the meeting the objectives of forest management. Finding from this research could be important to understand about the phenomenon of fund mobilization in different activities, the overall impact of socio-economic development and sustainable community forest management.

1.2 Statement of the Problem

The annual population growth rate is 1.35 percent in Nepal. Population pressure is also increasing day by day. About 81.10 percent of the total population pressure is in agriculture (Sapkota, 2010) but there is no other opportunity for employment. So deforestation, overgrazing and cultivation land have been done due to growing population. Nepal has been losing forest at alarming rate. Deforestation is one of the major problems in Nepal. Deforestation rate has been 0.5 percent per year. But only the government efforts are not sufficient to solve these problems.

Shiva community forest is situated in Kawasoti Municipality-2, where more than 45 percent people depend on agriculture. Economic status of the people is

not so good. People of Shiva community forest user group fulfill their basic needs from the forest such as; fodder for livestock, manure for harvesting land, timber for the construction of houses, shed and for various types of furniture's. People also fulfill their need of herbs form the forest. Forest is one of the most important natural resources for the people. Different kinds of ritual activities and ceremonies are performed by using the forest materials. Forest is also needed to the people for the performance of funeral rite.

Shiva community forest is performing different activities to increase the economic standard of the people. Shiva community forest has also helped in many developmental activities of the community. It makes different plans for the enhancement of living standard of poor people. The Shiva community forest provides opportunity for different kinds of skill development activities and loan in low rate of interest for different objectives such as livestock farming and agriculture focusing to the poor based household to uplift their living standard and reducing the inequality of wealth (Economic Survey, 2011).

If forest resource is managed and utilized properly, it can generate income and many developmental activities could be performed. However CFUGs are facing different problems in regard to the management as a result people are not getting complete advantages. Therefore the study tries to find out such kind of obstacle with some recommendation for the betterment of poor people and local development activities. The main problem of Shiva community forest is lack of management policy many kinds of livestock freely graze so that small plants do not increase. The major and directly affecting problems are lack of fuel wood, grass, fodder, leaf etc. Other problems are declining water sources and increasing soil erosions. The participation of men and women both can play an important role for the management of community forest.

The main focus of the present study is the role of community forest in socio economic development of Kawasoti Municipality-2, Shivamandir, Nawalparasi. This study also attempts to find out it's situation, management system, to analyze the benefits derived by the user group, and to find out the

problem of community forestry and utilization process conflicts between the forest policy and the user groups and their nature.

1.3 Objectives of the Study

1.3.1 General Objective

The main objective of the study is to understand the socio-economic status of Shiva community forestry user group, to find out the problems of community forestry and to find out the contribution of forest in poverty reduction in long term.

1.3.2 Specific Objective

This research will be focused on the economic impact of Shiva community forest. The specific objectives of this study are as follows:

i.   To examine the socio economic condition of study area.

ii. To analyze the benefits derived by the user group from the community forestry.

iii. To examine the management system and utilization of community forest resource in the study area.

1.4 Rational of the Study

This study will be useful in different sectors for the further study on the socio economic impact of Shiva community forest in Nepal. It will help decision makers, programe implementers and project implementers in order to development further strategies to support the poor women and other people and uplift their economic condition through community forest.

Community forestry is the most effective programme in developing economy of Nepal. It has solved many problems of the villagers by providing firewood, fodder, timber, employment opportunities and community development activities. The forest resources are decreasing with quality and quantity day by day because of their unsustainable use and their clearing up for settlement and expansion of agricultural lands. These activities have adversely affected the microclimate of the area. The CFUGs are not only provided with well stocked

forest but also with degraded forests. Out of the total CFUGs, 74 percent are in good condition and 18 percent are degraded. Rapid improvement in the condition of the community forests should be observed after handing over the forests to local communities (Kandel, 2010).

Many kinds of development plans can be performed using forest resource. Forest provides materials for construction basically for rural livelihood. Moreover, it has environmental and ecological importance too. Such an important natural resource is now in deteriorating process. The government and people should be serious to preserve the forest. It is possible only through the co-operation between people and government.

Implementation of Community Forestry Programme (CFP) has shown 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.

1.5 Organization of the Study

This study has been organized into five chapters. Each chapter developed to some aspects of the study on economic effect of Shiva Community Forest. The chapter one to five consists of introduction, literature review, research methodology, presentation and analysis of the data and summary and conclusion.

The first chapter of the study was introduction chapter. It covers background of the study, statement of the problem, objectives of the study, rational of the study and organization of the study.

The second chapter presents the literature review. It covers the theoretical review, empirical review and conceptual framework.

The third chapter deals with the research methodology. It covers research design, selection of the study area, source of data and information and tools of data collection.

The fourth chapter deals with the presentation and analysis of the data. It deals with community forestry development activities. It includes income generating

activities, income and expenditure. Benefits and problems of community forestry development. It covers benefits of users, forest product collection and distribution, availability of forest products and problem of community forestry development.

Chapter five deals with findings as well as includes summary and conclusion.

1.6 Operational Definition

Community Forestry :

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

Forest User Group (FUG) :

A group of individuals consisting two or more interdependent interacting persons that perceive themselves as having a unique relationship with members as distinguished from interactions with members.

Forest User Group Committee (FUGC) :

An executive body selected or elected by the forest users with representing toles and ethnic groups, which comprises by number of positions according to their constitution.

Community Forestry and the Forest User Group :

Community is a body of people living in one district or having common interests. The concept of community is used in different ways; both laymen and social scientists speak of a community as a neighbourhood, village or small town. Here the term is used to refer to people who represent a special form of society.

Socio-Economic Development:

Socio-economic development is a process that seeks to identify both the social and the economic needs within a community, and seek to create strategies that will address those needs in ways that are practical and in the best interests of the community over the long run.

CHAPTER-TWO

REVIEW OF THE LITERATURE

This study on community forestry is not new. Many government offices, NGOs, INGOs, researchers and higher levels students undertaken the study on community forestry in Nepal. At present many analytical studies on community forestry will be undertaken in different part of the world.

Much have been written about the formation of forest user group (FUG) and handing over of the forest. A number of studies on community forest published in various books documents, journals of forestry and community forestry programme. These available researches which were considered helpful to identity the objectives of the study reviewed.

2.1 Theoretical Review

The origin of community forestry is strongly linked to different approaches to forest management in the history of Nepal. Before unification of Nepal, it was divided into many small kingdoms. The ruler of these small kingdoms had arranged several system of forest management. Although most of the forests were state owned and people were free to collect forest products to fulfill their needs in no cost. (Dahal, 2003)

During the panchayat political system, many forest acts and amendment practices were performed. Some of them were Forest Law (1961), Forest Protection Special Law (1967), Panchayat Forests (PFs) and Panchayat Protected Forests (PPFs) (1978). Under Panchayat Forest system. Which has been kept barren of contains only stumps may be handed over by government to the village community on the prescribed term and conditions.

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. 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.

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.

Community forestry is not concerned with the protection of forest for its own sake but with providing sustainable source of forest product the people of Nepal (Fisher and Mall, 1994).

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

For the last two decades, community forestry programme has been adopted as one of the major strategies for managing the forests of the country. Community forestry in Nepal has become the most important programme within the forestry sector with the approval of MPFs in 1989, enactment of the 1993, community forestry legislation in 1997. The local communities as forest user groups have been entrusted with the responsibilities of management development and utilization of forest resource to their proximity. To date more than 9800 forest user groups are managing about 8.5 lakes of hectares of community forestry in the country (CFDP, 2010). The primary objectives of these user groups are to fulfill the energy needs in terms of the fuel wood and a number of inputs to sustain farming system along with conservation of forest, to make able the local people to decide their own fund. Before emergence of CF (Community Forestry) there were many state interventions design to enhance the greater control over forest resources and conservation of biodiversity.

However, the act failed to produce desired result as local political entities. Moreover the forest was handed over on the basis of political boundary without any proper identification of traditional and real use right. Hence, it neither

contributed to an efficient management nor ensured effective people's participation in forest activities. After all, these changes neither created environment for fulfill participation of the villagers nor entrusted them with an authority to protect, manage and utilize the forest. Thus the status of custodial element remained the same. However, changes in forest management became gradually evident after the implementation of forest sector master plan in 1988. The plan focused on achieving people's basic needs from various forestry products, increases income at village level, and conserve natural ecosystem and genetic resource by maintaining a safe and wholesome environment.

In 1991, after the restoration of multiparty democracy in the country, the government persued a policy of handing over forest resources directly to the villagers so that they can use it for rural development. Department of forest started identifying villagers and organized them as the forest user groups. In the true spirit of community forestry and for implementing the strategy suggested by the master plan. Forest Act 2049 was promulgated in 1993.The Act's preambles status in general, to attain socio- economic development and promote a healthy environment for ensuring development and conservation of forest through proper utilization of the forest products, the act emphasized on greater co-operation in conservation management development of forest resources. The act paved way for the formation of forest user groups (FUGs) to protect, manage and utilize the forest products to meet local needs of fuel wood, fodder and timber. The act also encouraged collective efforts towards community development through the sale of surplus products. Forest regulation was issued in 1995 without lines for protection, management and utilization of community forest. It prioritized the utilization of fuel wood and timber for meeting the domestic needs of the local people. Moreover it helps in simplifying flow of wood energy to the rural people.

2.2 Empirical Review

Different scholars and researchers have studied and written about the forest related to management and community developments, which are discussed below.

Pokharel (2006) states that it is possible from community forestry to reduce poverty by providing resource for the poor increasing the availability of resource and providing potential for income generating activities. Community forest contributes to improve people's livelihood. It has contributed significantly in building social capital.

Khanal and Niraula (2008) prepare a paper on 'can rural livelihood be improved in Nepal through community forestry?' This paper attempts to quantify the contribution of community forest to the community development and livelihood of people in Nepal based on 1788 CFUGs information of 12 districts. The data for this paper have been collected from 1788 CFUGs from 12 district of Nepal. The annual income and expenditure of CFUGs are collected from the district through district forest offices (DFOs). Among 1788 CFUG data, 247 are in Terai region and 1541 in hill region. The simple frequencies are used: Total CFUGs are broken down into two groups; hill and Terai regions. He finds the increase at income of CF due to the involvement of people in forest activities and the condition of local infrastructure better than before. CFUG are spending their time and income in forest protection, management and local development. He concludes CF can provide environmental, social, institutional and physical benefits. CF is financially viable, environmentally sound and socially acceptable option of forest management in Nepal and at last he recommends that CFUG should design programme in favour of poor people and evoke them to participate in different activities without any discrimination. He further writes" Most of the rural people in Nepal depend in traditional agriculture and livestock for their livelihood. Forest is the major component of farming system and plays a vital role in rural livehood by providing fuel construction materials and animal food.

Having agro based economy, Nepal has to develop and manage the existing forest resource to achieve the national goal of poverty reduction as mentioned in tenth five year plan.

Kharti (2009) submitted a master thesis on "The role of community forestry in community Development" to the central department of rural development. The study was conducted in community forest user groups of Dovan in Terai area landscape, Palpa district. His main objectives are to examine the economic status of households involved in forest group, to analyze the local development activities of CFUGs for rural development in the study area and its impact on community for income generation.

Neupane (2010) submitted a master's thesis on "Economic effect of community forestry in Nepal" to the central department of Economics. The study was conducted in Bhumisthan community forest user groups of Haitiya village development committee of Baglung district, Nepal. His major objectives are to analyze the contribution of CF for income generation in the study area and to recommend policy measures for benefical exploitation of CFUGs of Hatiya village.

The study is mainly based on primary data, which have been collected through questionnaire, Interviews, observation, key informant, field diary. Data have been analyzed using simple descriptive method to obtain the basic purpose of the study.

This study main findings were the inception of CF programme in the area management practice is gradually improving, villagers are now getting sustainable forest products, easy accessibility, co-operation among people and environmental benefits. Community forest in this area is the main source of fuel wood, fodder for livestock and timber for villagers. It is also the source to help other types of community development programme such as school support bridge constructions, electricity trail improvement etc. The whole village has got a good return from the forest and they are always willing to expand and develop the forest. Community forestry has played duel role, on the one hand it

helps in protecting forest and on the other hand it helps in community development activities.

Acharya and Oli (2011) prepared a paper on "Impact of community forestry in rural livehood". The paper endeavours to assess the impact of community forestry programme on rural livelihood and economy. Bharkhare community forest of Parbat District of western Nepal was selected for this purpose. The study site is located in Siwlaya VDC ward no. 1 in western Nepal of hilly region. The literacy rate is 85 percent out of total but 75 percent literate were Bramhin and Newar. Semi structured interview, focused group discussion, internal discussion, transect working, key informant, survey, line survey and observation were used to collect the information. Secondary information were obtained through CFUGs, district forest offices and published literature. The study finds that after the hand over of forest, the community people are participating actively in weeding, cleaning, protecting against fire and grazing, singling, pruning selective feeling, leaf litter collection soil conservation and plantation. The impacts of community forestry are multifaceted and complex. Their nature varies from direct and non measurable to indirect and measurable. The impacts of CF (Community Forestry) are grouped into two categories bio-physical and socio-economic. Impact of community forestry management was beneficial to the users but some negative effects were also observed. The most beneficial impact of programme is the rehabilitation of degraded hills. Thickness of forest has increased. Implication of CF shows the positive socio-economic impacts such as capacity and infrastructure building. Rural infrastructure building and community development through the support of CFUGs and helped in developing mechanism for participatory development process in natural resources. Marginalized sector of community including women and Dalit have been empowered. It was also noticed that household level benefit from CF has increased. Each household has been receiving average amount of 1248 kg to 2359 kg of forest product since the last 10 years. Each household of CF has extracted about NRs 3200 worth of forest product annually from the forest within the period of 10 years. CFUG is able to collect

the fund and spend it in various educational and development activities such as quiz competition, plantation etc. It has also helped to reduce the conflict.

The conclusion of the study is that after the implementation of CF, some positive impacts have been noticed such as control of soil erosion conservation of water resources and bio-diversity conservation. It was also found that social cohesiveness among the forest users of different casts/ethnic groups has developed which helps minimize the gap between higher and lower caste and income inequality.

2.3 Conceptual Framework

Socio-Economic Variables
  Occupation
  Ownership of Land
  Major Crops
  Food Sufficiency
  Animal Husbandry
  Source of Cooking

Demographic Variables
  Age/Sex
  Ethnic Composition
  Marriage
  Migration
  Fertility
  Mortality
  Social Mobility

Role of CF in Socio Economic Development

Intermediate variables
  Income Generation Activities
  Effect on direct Income
  Impact on social status by CF

CHAPTER-THREE

RESEARCH METHODOLOGY

3.1 Research Design

In this study descriptive as well as analytical research method has been used because primary and secondary data were used in this study. Factors determining socio-economic impact of community forestry and also local development are 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 are 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 methods of data analysis.

3.2 Site Selection and Rationale

Primary data refer to the information, which has originated directly as a result of the particular under investigation. Primary data were collected through structured questionnaires. The total numbers of forest user households are find out to be 687 in Shiva community forestry user group. Total population of Shiva community forest user group is 3562. Out of total households 40 has been taken as the sample size. Each sampling unit has been selected by simple random sampling without replacement. Necessary information and data were collected from the study area.

Total sample household of the Shiva community forest user group are 687 where there are 3562 people out of which there are 1782 male and 1780 female. The population composition of Shiva community forest user group is noticed almost as equal in percentage of male and female. Male population is slightly greater than female. So, this community forest user groups is one of the

most popular forest user groups in that reason this forest user groups has been chosen for this study.

3.3 Universal Sampling

Different data collection techniques have been employed to obtain different types of quantitative, qualitative data and empirical information. Some techniques, used for data collection are described below.

3.3.1 Questionnaire

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

3.3.2 Interview

Interview method has been used to collect empirical information related to this study. Empirical information obtained form interview method includes cause 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.

3.3.3 Observation

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

3.3.4 Selection of Key Informants

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

3.4 Nature and Source of Data

This study has been based on both primary and secondary sources of data. Primary data were collected from the study area. During the field work primary data on key information were collected 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 the study. 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 include in this study. Similarly, other secondary sources of information are; articles, books and dissertation on related topics.

3.5 Presentation and Analysis of Data

The collected data has been classified, tabulated and analyzed in terms of simple statistical tools like frequency, percentage as well as mean and tables, bar-diagram, pie-chart were used in this study. Descriptive method has been taken into consideration to obtain the basic purpose of the study.

Quantities of firewood are taken in kilogram and quantity of timber has been taken in CFT and converted it into monetary term. Both quantitative and qualitative data analysis has been used for the analysis of the collected data. For the analysis of the quantitative data percentage and mean are used.

3.6 Limitations of the Study

The present study focuses only one Shiva Community forest user group. 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 recommendations given here may help for further study.

1. This study covers only few variable and limited items in terms of deeper analysis. Hence only selected variable i.e (firewood, timber, livestock and fodder) have been taken into account.

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

CHAPTER-FOUR

SOCIO ECONOMIC CHARATERISTICES OF RESPONDENTS

4.1 Description of the Study Area

Nawalparasi district is connected to Rupandehi District on the west, Palpa and Tanahun Districts on the north, Chitwan District on the east and south and the Indian border. The longest road of Mahendra highway, 99 km in length, lies in this district. Major cities of Nepal such as Butwal, Siddharthanagar, Tansen and Bharatpur Sub metropolitan municipality are located in neighboring districts.

The district, with Parasi, Nepal as its district headquarters, covers an area of 2,162 square kilometres (835 sq mi) and has a population (2013) of 643,508.

While about half of the vegetables, pulses and oilseeds consumed are produced within the district, unmet increasing demands for the commodities are addressed through imports, mostly from India.

Forests cover 21.56 percent (30484 ha) of the district. Major timber of the district are Sal, Khayar, Satisal, Jamun, Karma, Sankhu, Teak, Bombax, Marmelos, Tooni, RajaBrikshya, Botadhyaro, Sirish, Kadam, Saaj, Fadiyor, Asna, Sisaun, Chanp, and Sahadavan. Non-timber forest products in the district include Harro, Barro, Bijayasal, Khajurpatta, Naagbeli, Sarpagandha, Tejpaat, Eucalyptus, Gumba, Variyara, and Bojho. Forest area in the district is declining; the district lost 6,000 ha of forests in last 21 years.

4.1.1 Socio-Economic Condition

4.1.1.1 Ethnic Composition of Study Area

This area has diverse caste/ethnicity such as Brahmin/Kshetri, Newar, Gurung, Magar, Tamang and other lower castes like Kami, Damai, Sarki etc. There are also some Shukumbashi staying since a long time. Shiva community forest user group is the composition of different ethnic group. Out of which dominant ethnic group Bramhins/ Kshetries.

<div align="center">

Table No. 4.1

Ethnic Composition of the Shiva Community Forest User Group

</div>

Ethnic Group	No. of Households	Percentage	Remarks
Brahmin/Kshetri	24	60.0	
Janajati	11	27.5	
Dalit	5	12.5	
Muslim	0	-	
Total	**40**	**100**	

Source: Field Survey, 2072

From the above table it is noticed that in the total 40 households, there are 24 households belonging to Bramin/Kshetri which occupies 60 percent households. 11 households are occupied by Janajati it is 27.5 percent. Dalit were 5 households it is 12.5 percent in total. Ethnic composition of the Shiva community forest user group has been shown in the following diagram.

<div align="center">

Figure No. 4.1

Ethnic Composition of Sampled Households

</div>
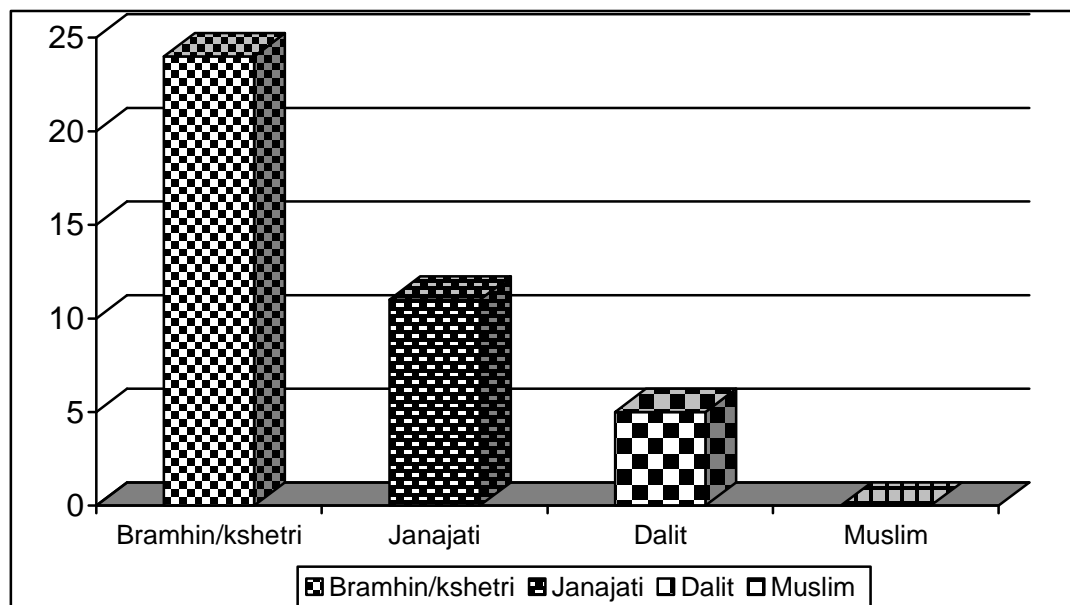
Source: Table No. 4.1

4.1.1.2 Occupational Composition

Agriculture is the main occupation of the people living in study area as well as the people of Shiva community forestry user group. Bramhin and Kshetri are

comparatively richer than other ethnic group. Bramhin and Kshetri occupy comparatively more land than other ethnic group. Because of getting higher education most of Bramhin and Kshetri are job-holder. Landholding pattern of the people of Shiva community forestry user group is noticed unequal where most of the fertile land area is in the grip of *"Bramhin/Kshetri"*.

Although agriculture is the main occupation of the people of Shiva community forestry user group, they adopt different occupations. Most of the so called Dalit adopt their traditional occupation such as *Kami*-iron making *Damai*-tailoring. Besides most of poor people are engaged in wage labour, loader, carpenter etc. Specially, the people consisting of so called *Dalit* can be noticed adopting lower class work.

Table No. 4.2

Occupational Composition

Occupation	Frequency	Percentage	Remarks
Agriculture	23	57.5	
Service	10	25	
Business	7	17.5	
Wage Labour	0	-	
Traditional Profession	0	-	
Total	**40**	**100**	

Source: Field Survey, 2072

From the above table it is known that out of 40 households, number of people adopting agriculture as a major share is 23 and 57.5 percent in total. Then people engaging in service are 10, it has 25% share. Business profession are 17.5 percent and wage labour and traditional profession are not in this area. Most of the respondent engaged in agriculture because the main occupation of the Nepal is agriculture. According to the census 2011 among the total population of the Nepal 74% people are engaged in agriculture.

Figure No. 4.2

Occupational Composition of Sampled Households
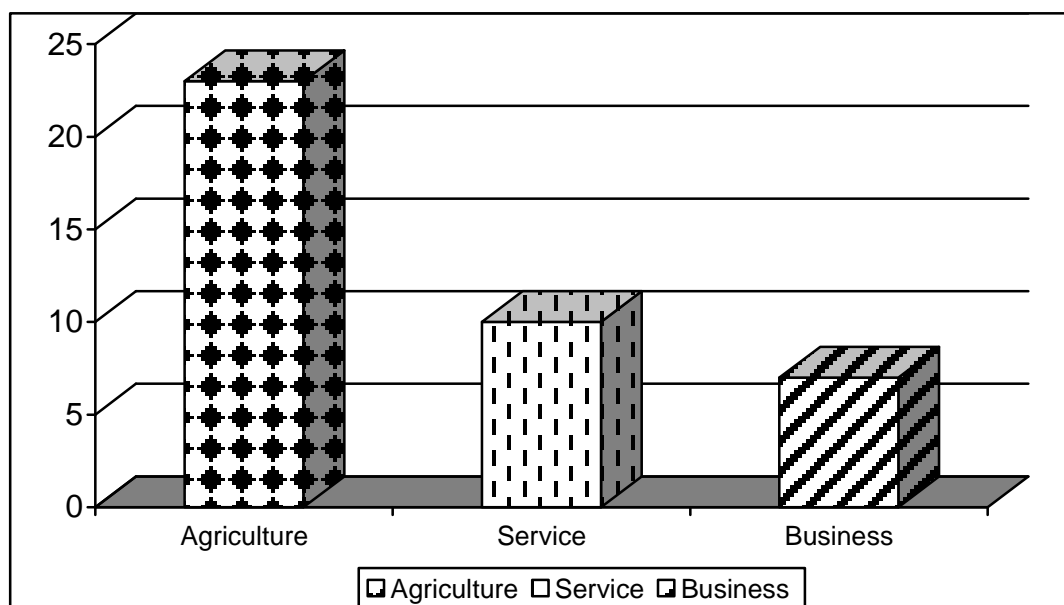
Source: Table No. 4.2

4.1.1.3 Land Holding Patterns

Land holing determines the food sufficiency of the people. It also indicates the income of the people. The highest ethnic group of land holders of Shiva community forest user group is Bramhin and Kshetri than there comes Janajati as a second higher land holders ethnic group.

Table No. 4.3

Average Land Holding Pattern of Households by Ethnicity

Ethnic Group	Households	Land in Katta	Average Land Holding in Kattha	Remarks
Bramhin/Kshetri	24	187.5	7.8	
Janajati	11	106	9.6	
Dalit	5	55.5	11	
Muslim	0	-		
Total	**40**			

Source: Field Survey, 2072

Above table shows the average land holding in Kattha, the bramin and kshetri were holding total 187.5 kattha which is average 7.8 kattha and janajati average

9.6 kattha and dalit were average 11 kattha. In the context of the Nepal Bramhin and kshetri have the high proportion of the land in the comparison of other ethnicity.

4.1.1.4 Major Crops

Maize and Millet are the major crops of the Shiva community forest user group.

Table No. 4.4

Major Crops of the Respondents

Ethnic Group	Paddy	Wheat	Maize	Millet	Cash Crops	Remarks
Bramhin/Kshetri	7	7	21	20	22	
Janajati	5	5	11	10	10	
Dalit	4	4	5	4	-	

Source: Field Survey, 2072

Above table shows the major crops of the respondents. Maize and Millet are the major crops of the study area. In Bramhin/Kshetri and Janajati were major crops are cash crops is higher than dalit. In the study are Bramhin and Kshetri are more aware for earning generate activity they have better knowledge of how to make the high earning rather than the other ethnicity.

4.1.1.5 Food Sufficiency Households

Those people who are unable to solve their daily hand to mouth problems are compelled for hard working wage labour. Specially, Dalit are in this category.

Table No. 4.5
Food Sufficiency of the Households

Particulars	No. of Households	Percentage	Remarks
Less than 3 Month	15	37.5	
3 Month	2	5.0	
6 Months	7	17.5	
9 Months	4	10.0	
One Year	12	30.0	
Total	**40**	**100**	

Source: Field Survey, 2072

The tables show that out of 40 household survey 15 households are food saver less than 3 months, 12 households have sufficient food for their family consumption for the whole year, 4 households have food only for 9 month; 7 households have food only for 6 and 2 households have food for 3 months. Those people who are food saver sell the food in market and those people who can not fulfill their food requirement from their own land should purchase either from the market or from local food saver.

4.1.1.6 Animal Husbandry

Animal husbandry is also a part of agriculture. The prosperity of family can also be judged by the number of animals they own. They depend on forest to feed their animals.

Table No. 4.6

Ethnic Group Owning Different Animals

Ethnic Group	Cow/Ox	Buffalo	Goat	Hen/Ducks	Sheep	Other	Remarks
Bramhin/Kshetri	25	27	22	5	-	-	
Janajati	11	7	41	54	-	2	
Dalit	6	6	14	40	-	-	

Source: Field Survey, 2072

From the above table it is known that out of total households i.e. Bramhin/Kshetri 25 cows/ox, 27 Buffalo, 22 goats and 5 hen/ducks respectively. Brahmin/Kshetri are not found to be rearing sheep. Janajati and Dalit are found to be rearing 11 cows/ox, 7 buffaloes, 41 goat, 54 hen/ducks and 2 other animal same as, dalit were 6, 6, 14 and 40 were cows/ox, buffalo, goat and hen/ducks respectively. Each of the ethnic groups is found to be rearing one or two kinds of animals in the community. Most of the Bramhin rearing buffalo, most of the dalit and janjati rearing hen and duck. In the bramhin and kshetri community they don't like duck and hen and most of the dalit and janajati like rear the duck and hen.

4.1.1.7 Source of Firewood

Source of firewood is most important of agriculture sector. Shiva community

forestry provides timber to the member in a nominal rate. Timbers are distributed indiscriminately to the users as per their needs.

Table No. 4.7

Source of Firewood

Options	Total Households	No. of Households	Remarks
Community Forestry	40	40	
Private Forest	40	-	
Agriculture Product	40	6	

Source: Field Survey, 2072

Above table shows out of total 40 households all households source are community forestry but 6 households were use own agriculture product also.

4.1.1.8 Source of Energy for Cooking

Energy is ability to do work. We use energy for cooking our food mild. Cooked food is better for digestion. The main cause of forest deforestation is using fire wood. We can decrease fire wood by using improved stove, L.P Gas, Bio- gas, electricity etc.

Following energy source are used in the study area which is given below.

Table No. 4.8

Source of Energy for Cooking

Ethnic Group	Bramhin/Kshetri	Janajati	Dalit	Total
Firewood	18	10	5	**33**
Bio-Gas	4	2	1	**7**
LP Gas	22	10	5	**37**

Source: Field Survey, 2072

We should offset the pressure on forest because 33 household out of 40 households depend on firewood where as, 18 households were bramhin and kshetri, 10 households were janajati and 5 house holds were dalit. The highest household's members use LP Gas as well as firewood. We should donate

improve stove to use wastage dust which are combustible. It protects jungle resources. Bio gas plant use only seven household's members.

4.1.1.9 Solving Economic Problems

Shiva community forest user groups provides various benefits in different sectors. Researcher asked the questions do you fill to solve the economic problems in your need, following responses has been drawn. This is shown in below table.

Table No. 4.9

Solving Economic Problems of the Respondents

Options	No. of Households	Percent	Remarks
Yes	33	82.5	
No	7	17.5	
Total	**40**	**100**	

Source: Field Survey, 2072

Above table shows the 82.5 percent respondents were said solve the economic problems in this community forest user groups and 17.5 percent respondents were give negative answer. It is clear that this community forest user groups solve their economic problems maximum member of this community.

4.1.1.10 Use to Timber Recently

Table No. 4.10

Use to Timber Recently of the Respondents

Options	No. of Households	Percent	Remarks
Yes	14	35	
No	26	65	
Total	**40**	**100**	

Source: Field Survey, 2072

Above table shows the 35 percent respondents were used timber recently and 65 percent respondents were not used timber recently. So, it is clear that Shiva Community Forest User Groups can not provide sufficiency timber for the their community.

4.1.1.11 CF Helped to Reduce the Poverty

Table No. 4.11
CF Helped to Reduce the Poverty

Options	No. of Households	Percent	Remarks
Yes	30	75	
No	5	12.5	
No idea	5	12.5	
Total	**40**	**100**	

Source: Field Survey, 2072

Above table shows out of total respondents 75 percent were agree to help reduce the poverty by community forestry, 12.5 percent respondents were said No or No idea about this respectively.

4.1.1.12 If Yes, How?

Table No. 4.12
If Yes, How?

Options	No. of Households	Percent	Remarks
Provide loan to the poor people	5	16.67	
Provide skill oriented training	3	10	
Provide educational opportunity	22	73.33	
Provide subsides in the forest goods	-	-	
Total	**30**	**100**	

Source: Field Survey, 2072

Above table shows out of total agreed respondents 16.67 percent said to provide loan to the poor people, 10 percent respondents were said provide skill oriented training for the help to reduce poverty and the highest respondents 73.33 percent were thought to provide educational opportunity to reduce poverty by the community forestry.

4.2 Benefits Derived by User Group from Community Forestry

Forest is the only option of source of energy for the people. People are not able to sustain their lives purchasing kerosene and gas because of their limited income. Fire wood is collected from the forest for cooking and heating.

Because of the increasing population, demands of forest products are increasing day by day. As a result forest is destroying rapidly. Therefore, it is a proper time to conserve the forest for fulfilling the rural demand for energy as a compensation of petroleum product.

Community forestry program is implemented mainly with the concept of social service. Therefore, it is not possible to access its project purely on the basis of commercial benefit-cost analysis. Its benefits and costs must take into account the various relevant factors which affect national welfare, environment, resource and security. Men's welfare, soil and water management in which forest plays vital role. Their diverse contributions include several abstruse beneficial influences are pollution control, temperature control, retardation of the flow of heat into the ground during the day and its exudation during the night, interception of rain water and its infiltration, water and soil conservation, role of trees shelter belts and wind breaks, capability, role of trees to fix atmospheric nitrogen leading to the production of nitrogen fertilizers, recreational and amenity values, Scientific and educational values.

Community Forestry provides various benefits in different sectors. Some of the benefits derived by the users group are categorized in the following topics.

i) Socio-Economic Benefits

Community Forestry programme is launched in the society for the welfare of rural people. Many development activities and poverty reduction programme are performed through the community forest by using the fund created by itself. Community forestry programme for rural people has become one of the most essential and beneficial since it has made the rural people self dependent.

Most of the expected economic benefits of community forestry to the rural communities were expected to be non-monetary and strongly related to subsistence use. The creation of increased forest resource and proper management of this resource in the community forest has provided significant economic benefits to the users. Some of the socio economic benefits derived by Shiva community forestry are as follows.

a) Strengthening Organization

After the establishment of the Shiva community forestry, people are able to tackle every type of social problems through strong organization. Some of the minor development activities are performed collectively through their own labour; collective force has resulted to save time and money. People are much interested for social work. Now Shiva community forest is like a family and members of it are member of family rather than the members of society.

b) Employment Generation

Specially, poorest family of Shiva community forest are employed in different works for the security of forest, peon, carpenters, labours, forest monitoring committee have been selected from poor family. Shiva community forest has given much priority to the local people for fulfilling the different vacant posts.

c) Increase the People's Participation

After the implementation of community forest people of different castes Dalits and women are equally participating in each and every activity of community forest.

d) Co-operation among People

Density of forest has increased and forest materials are easily available. There is no quarrel among the people for forest materials because people are getting forest materials equally through the legal process. People's thought about forest has been changed. They think forest as their own property and contribute equally for the conservation of forest.

People in this community have united to increase the economic status preservation, proper utilization of resources and efficient co-ordination among the member of the user group.

e) Easy Availability of Forest Products

Shiva community forestry has highly contributed to increase the forest products such as grass, leaf, litter, fire wood, fodder, poles etc. The user group has

accumulated the significant amount in its community fund from its indigenous forest management and this fund is used welfare of the community.

ii) Environmental Benefits

Some of the major environmental benefits of community forestry are as follows:

a) Increase in Forest Cover

Cover and density of Shiva community forest has increased significantly due to the implementation of community forest and changed thought of people.

b) Increase Soil Fertility

Shiva community forest user group has given more emphasis in agriculture to increase the income of people. Due to the easily availability of fodder and leaf-litter, people use manure in their farm which helps to increase the fertility of soil. On the other hand user group spends its fund for the construction of small catchments too.

4.2.1 Activities of Shiva Community Forest User Group

Nepal is a country of villages. Most of the villages of Nepal are underdeveloped. Main features of Nepalese villages are lack of infrastructure of development, lack of proper technical education, poverty, traditional agriculture, lack of modern agricultural equipments, lack of improved seeds, lack of knowledge etc. The main occupation of underdeveloped countries is agriculture. Most of the people in underdeveloped country live in village and adopt agriculture as the main occupation. People living in village fulfill their many basic needs from the forest. Forest helps agriculture in many ways. Forest and agriculture have a close interlink. Forest provides fodder for livestock, manure for agriculture, different kinds of herbs, fuel wood for cooking and heating, timber and poles for the construction of house, shed for various kinds of furniture, tall grass (*Khar*) for making the roof of the house and shed. Forest also helps to have proper rainfall in time and also prevents from the natural disasters like soil erosion, flood, downpour etc.

The Shiva community forest user group has played a very crucial role for the people. The user group collects funds by selling different kinds of forest materials like timber, tall grass, bamboo, fire wood, different kinds of medicinal herbs and invests the collected fund in local infrastructure development and income generating activities so that it helps in poverty reduction. Some of the income generation activities undertaken by Shiva Community Forestry User Groups for poverty reduction as well as social development has been described below.

i) Timber for Poor

The user group selects 20 households every year form the community who are the poorest and who don't have alternative income source and provides them 15 CFT timbers on very low charge. This programme has been initiated by the user group with the objective of reducing the level of inequality and providing the facility of SCFUG to each and every household of user group.

ii) Timber for Natural Disaster Affected

The Shiva community forest user group provides necessary timber and poles for the people affected by natural disaster like fire, landslide, flood etc. without any charge.

iii) Job for Poor

The Shiva community forest user group has provision of enhancing the economic and social status of the people so that inequality could be reduced. For this purpose, user group collects the list of poor and deprived group from the community and provides employment as forest watchers, forest guards and other required post. Now there are 6 watch men selected from the lowest income class for daily duty.

iv) Investment in Agriculture

The Shiva community forest user group distributes its twenty percent fund in agriculture every year. Agriculture is the main occupation of the people of SCFUG and it is also the source of income of the people. SCFUG is directing different kinds of technical training to the people and provoke the people for

using improved seed, fertilizer and modern agriculture equipments so that the productivity of land could be increased.

v) Plantation

The SCFUG is spending its fund every year for plantation and conservation of the land from erosion, Landslide and flood. Agriculture is the only option of the people of SCFUG. Therefore, high priority should be given on agricultural sector for the betterment of the poor. Quality and productivity of land should be improved.

4.3 Management System of Shiva Community Forest User Groups

4.3.1 Collection of Forest Products and its Distribution

The main forest products collecting from Shiva community forest are fuel wood, timber, fodder, grasses, leaf, litter and poles. These products are collected for the domestic purpose. The forest user group has initiated plan and rule for the protection, collection and distribution of forest products. The collection and distribution of fuels for these products outlined in the forest user groups statute and forest operational plan are as follows:

i) Fuel Wood

Fuel wood is collected from singling, pruning and thinning operations that are carried out every year. Green fuel wood collection is strictly prohibited. The FUG has permitted to collect fire wood from the forest, Sunday and Wednesday twice a week. The fuel wood collected through the CF office has fixed two types of fuel wood charge for Sal and non Sal tree. Sal fuel wood is sold in Rs. 500 per quintal and non Sal fuel wood is sold in Rs. 350 per quintal. People besides the community forestry user group can't purchase the fuel wood from CF. Each member of CF has to obey the rule of community forest. Member of the community should not get facilities provided by the user group if they are found violating the rules of CF. Users can collect only dry twigs and dry branches from the forest. If people are found in the forest with big weapons, they are fined as per their offence. Each household can get 4 quintal

fuel wood from the forest annually with nominal charge fixed by CF. The CF provides fuel wood for cremation performance without any charge and if anybody conduct religious activities CF provides fuel wood as per their need.

ii) Timber and Poles

Shiva community forestry provides timber and poles to the member in a nominal rate. Timbers are distributed indiscriminately to the users as per their needs. The community forest office collects over matured and fallen trees from the forest and carries out a need assessment of the users and provided up to 25 cubic feet of timber and poles specially to those who need timber and poles for house, kitchen and shed construction and maintenance. For this, users are charged Rs. 475 per cft of Sal timber and Rs. 250 per cft of non Sal timber. Community forestry office provides timber for making furniture and house making. The community forestry gives timber cheaper than the free market. The timber is sold in free market only if there is surplus of timber after distributing the community for domestic purpose. Besides the private purpose, the timber and poles can be given to those people who are suffered by natural disaster. Community forest provides timber with low rate to those people who are extremely poor in the community. If the societies need timber and poles for social infrastructure building such as electricity, schools construction, timbers can be used without hampering the conditions of forest or as per the operation plan.

iii) Fodder

Users can collect fodder all over the year from forest on Rs 40 for one week. People staying the nearby forest depend on it to collect fodder for their livestock. But the people are not allowed to collect tree fodder. It has given permission to the people to collect only green ground grass. The user group has strictly prohibited the people to take big weapons in the forest to cut big branches of the tree for fodder and other purpose.

iv) Protection of Forest

The forest is protected from fire setting, cattle grazing, illegal felling of trees and smuggling of timber and collection of forest product such as medicinal herbs and other raw materials through a strike system of forest watching. The community forestry has employed some persons as forest watchers. They are called *"Ban Pale"*. They watch the forest in the day and night according to their turn. If the people are found in forest with illegal activities, they are punished and fined as per their offence. Money collected form such fines and punishment is added into the fund of user group and spends it as per the need of the community.

4.3.2 Income and Expenditure of the Shiva Community Forest User Group

i) Source of Income

The CFUG has been generating income from various activities such as selling of forest products, penalties, entry fees or membership fees and functional levy. In this CFUG, donation from outside has also become a source of income. Shiva community forest user group is a reputed user group therefore, different NGOs are hearty ready to help the Shiva community forest financially and in other ways. The income collected since the last five years from different activities is shown in the following diagram.

Figure No. 4.3

Source of Income

36
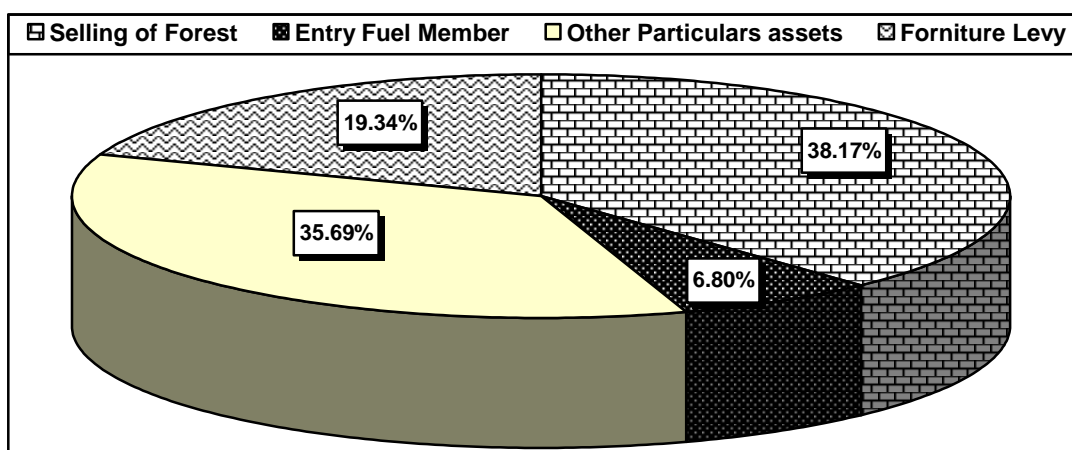
The total income of Shiva community forest user group was Rs 2577364. In which income from entry fees/ member fees was Rs 175261. It is 6.8 percent of total income. Income from selling of forest product was Rs 983780. It is 38.17 percent of the total income. Similarly, income from functional levy was found Rs 498462. It is 19.34 percent of total income and income from other penalties assistance, donation and interest was found 35.39 percent of total income. The amount collected through other penalties assistance donation and interest was Rs 91986.

From the above figure, it can be seen that forest plays a significant role for income generation. The large portion of income source from forest is used for different developmental activities and poverty reduction programme. This shows that forest is most important for the rural livelihood. Different basic needs are fulfilled from the forest. Many forest products are also needed for urban people.

4.3.3 Income Generating Activities through Community Forestry

The income generating activities may be described as direct or indirect source. The more are the sources of income the more the community forest can spend its fund for the betterment of poor people and developmental activities. The direct income generating activities such as Bamboo planting, tall grass planting, income through tractor fair are being initiated in Shiva community forest user group, though all of the income sources have not started to give outcome.

Majority of the people in the community have limited income source therefore it is necessary to uplift the condition of agriculture, use of modern technology and fertilizers to raise the level of income. This CF has helped to prevent the source of watershed to irrigate land and to yield more production in the village. Some of the activities which help to generate income indirectly are analyzed as follows.

i) Indirect Income from the source of fuel wood

The fire wood is used for different purpose. Most of the households depend on the fire wood for cooking and heating in winter seasons. User members utilize fire wood in high quantity during the important festivals but agricultural residues are also used temporarily.

Table No. 4.13

Indirect Income from the Source of Fuel Wood

Source	Full Wood		Market Price		Total Price	
	Bhari	Percent	Rs.	KG	Rs.	Percent
C.F	3327	65.5	85	30	282795	65.5
Market	874	17.2	85	30	74290	17.2
Agriculture & Private Forest	879	17.3	85	30	74715	17.3
Total	**5080**	**100**			**431800**	**100**

Source: Field Survey, 2072

(* 1 Bhari = 30 Kg.)

Total fuel wood consumed were 5080 Bharries last year, among which CF contributed 3327 Bharries i,e 65.5% of total consumption. The market price of fuel wood per Bharri being Rs.85 and per Bhari fuel wood consists of 30 kg have been calculated the market price of fuel wood which accounts for Rs 282795. People bought 874 Bharries from market in which they spend Rs. 74290 (17.2%) and private forest 879 which account for Rs 74715. The people save Rs 282795 from CF which has otherwise been spent to fulfill their need of fuel wood. Fuel wood is distributed from community forest equally with a nominal price rate of Rs.0.85 per kg of Sal and Rs 0.65 per kg of non-sal tree.

ii) Indirect Income Generation from the Source of Timber

Timber is the main source of construction material in village not only for making houses but also for making agricultural tools, furniture and shed for livestock etc. Community forest distributes 20 cubic feet of timber to the people at the nominal rate of Rs. 475 per cubic feet of Sal tree and Rs.275 per cubic feet of non Sal tree.

CHAPTER-FIVE

SUMMARY AND CONCLUSION

5.1 Summary

Shiva community forestry area has high literacy rate. More than 85 percent people are literate. They are very much aware to conserve the forest. The main occupation is agriculture, cash crops and trade have helped to raise the income level of people. Livestock rearing is also the other main occupation of the people of Kawasoti Municipality. People are being benefited by the adoption of different occupation.

From the research conducted in Shiva community forestry user Group taking 40 households as sample from the community with the simple random sampling procedure with out repayments where 51.72 percent are males and 48.28 are females 24 households of the community are found Bramhin/Kshetri, Janjati 27 households, Dalit 5 households and Muslim are not in this community user groups. 57.5 percent people are found adopting agriculture as the main occupation.

Then the other occupations adopting by the Shiva community are service 25 percent, business 17.5 percent, wage labour and traditional profession are not found in out of 40 households. In average, each households is found meaning at least one or two livestock from abasing the different animals such as cow, ox, buffalo, sheep, goat, pig, duck, chicken. 87.75 percent people are found literate in which 57.11 percent males and 48.89 percent females are literate. Highest landholders of the community are found Brahmin/Kshetri and Janajati. Lowest land holder ethnic groups are Dalit. It is also found that most of the people belonging to Dalit can not sustain their lives harvesting crops in their own land. They should purchase food from the market for 3-9 months for consumption in a year.

This Shiva Community Forest User Groups gives education to the local people so as to reduce social conflicts by making them aware of social conflicts. People cut trees and timber to sell illegally due to unemployment. Forest management practice is not matured. The DFO, NGOS and INGOS are also give training to the user people to increase the management skill on forest. Poor people are found to be selling firewood illegally in market due to the lack of alternative income source. The SCFUG pay high attention for the creation of alternative income source for the poor so that they wouldn't be depended on firewood selling for their subsistence.

5.2 Conclusions

The Shiva community forest was found such as facility of to be playing a very crucial role for the betterment of poor and deprived group of people by implementing different kinds of poverty reduction programme such as facility of loan, timber with out charge, timber for natural disaster affected population, job for the poorest family etc. The user group is also doing different activities in terms of improving fertility of land conservation of forest for healthy environment, bio gas programme for the conservation of forest and women's heath as well as generating the income of the people through livestock rearing. The SCFUG in also doing for the whole community. Every household of the community is getting different kinds of facilities and are being benefited. The FUG is providing timber firewood, log for furniture to the community people in discount rate. Community is providing kitting, cutting and sewing training to the girls belonging to forest user group that has helped the disabled, uneducated, poor and deprived girls to be self dependant

The SCFUG is also found to be playing a very crucial role for local development. The community is spending its fund in road linking water supply, electricity extension health post assistance, school building etc. Now every ward of the community has been linked with roads with the assistance of FUG. People can sale their products in the market and income of the people seems to be increasing.

The SCFUG is also spending its fund for soil conservation, bridge construction, plantation etc. The people are being benefited by the SCFUG in two ways; on the one hand, they are receiving different facilities such as sustainable collection of forest products different forest products in nominal and discount rate. On the other hand less time consumption in forest products collection, healthy environment, social integrity, people's consciousness etc.

Success of community forestry depends on the participation, co-operation, satisfaction, benefit and motivation of the people as a whole. The most important thing for community based forestry programme is to make the people conscious about the importance of forest. Forest is re-productive natural resource. Forest is needed from birth to death for rural people. Government and different NGOS and INGOS should provide proper education to the people for the conservation of forest. Proper laws and legislatures should be implemented effectively. Only the government cannot conserve the forest. Both the government and civil society should do co-operatively.

Community forestry programmed has played a vital role for rural development and income generation. Community based forestry programme had controlled the forest to be rapidly degraded. However, people are not capable for managing it to get complete benefit. They are not able to make proper plan to get specific objective because of the lack of knowledge in management. They are not to be left alone for management of forest. Different NGOS, INGOS and government should act together to get complete benefit from the forest.

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Appendix

Questionnaire:

Questionnaire for Household Suvery-2015

1. General Information

    a) Name of the household head: b) Sex:

    c) Ethic Group: d) Language:

    e) Religion: f) Occupation:

    g) Education:

2. Family Description:

S.N.	Name	Age	Sex	Education	Occupation	Remarks

3. Economic Information

a) Population having land

S.N.	Land Type	Area in Khatta	Cultivation Ownership			Remarks
			Self	Rented Out	Rented in	
1	Khet (irrigated land)					
2	Bari (Non-irrigated land)					
3	Private forestry/garder					

b. Area and production of major crops

S.N.	Crop	Area (In Kattha)			Production in Muri	
		Irrigated	Non-Irrigated	Total	Irrigated	Non-Irrigated
1	Paddy					
2	Wheat					
3	Maize					
4	Millet					
5	Cash crops					

c. Food sufficiency in month

    i. Less than 3 months   [   ]

    ii. 3 months   [   ]

    iii. 6 months   [   ]

    iv. 9 months   [   ]

    v. 12 months   [   ]

d. How many livestock do you have?

S.N.	Livestock	Total Number
1	Cow/Ox	
2	Buffalo (he/she)	
3	Goat	
4	Hens/ducks	
5	Sheep	
6	Others	

4. Income sources of people

S.N.	Occupation	Income (in Rs.)
1	Agriculture	
2	Business	
3	Services	
4	Wage Labour	
5	Others	

5. Source of firewood

S.N.	Source of Firewood	Cooking	Heating	Unit	
				Kg.	Bhari
1	Community Forestry				
2	Private Forest				
3	Agriculture Product				

6. Need of forest products

S.N.	Particulars	Amount	From CF	From Own land	Others
1	Full wood				
2	Fodder				
3	Timber				
4	Leaf liter				
5	Medicinal plants				

7. What do you use for cooking food?

a. Fire wood   b. Kerosene   c. Bio gas

d. Gas   e. Others

8. How many Bharies of firewood you need annually?   [   ]

9. Has community forestry hoped to solve economic problem?
    a. Yes   b. No

10. Has community forestry helped in supplying of firewood?   [   ]

11. How many Bharies of fodder/grass do you need to feed your livestocks for a week?   [   ]

12. From where do you get the fodder?
    ……………………………………………………………………

13. Have you used timber recently?
    a. Yes   b. No
    If Yes, Why?
    a. House construction   b. Furniture
    c. Animal shed construction   d. Tools

14. From where do you get timber?
    a. Government   b. Community forest
    c. Market   d. Others
    If you don't receive timber from community forest, why?
    ………………………………………………………………….
    If you receive timber from community forest, why?
    ………………………………………………………………….

15. Do you have any problem for preservation of community forest?
    a. Yes   b. No
    If yes, what can be cause?
    ………………………………………………………………………………

16. Who is more responsive for the protection of community forest?
    a. Male   b. Female   c. Both

17. Has community forest helped to reduce the poverty?
    a. Yes   b. No   c. No idea
    If yes, how?
    a. Provide loan to the poor people.   b. Provide skill oriented training
    c. Provide educational opportunity   d. Provide subsides in the forest goods.
    e. All

18. Is there any development program supported by CF?
    a) Yes   b) No   c) No idea
    If yes, What are these?
    a) Road/School Construction   d) Drinking Water Supply
    b) Electricity Extension   e) All
    c) Dam Construction

19. How are the development activities supported by community forest?

    a) Free supply of forest products.

    b) Free labour supply form user group.

    c) Financial assistance from CF.

    d) Other

20. Where do you get tree plants for community forest?

    a) Govt. Nursery   d) Other Place

    b) Non Govt. Nursery   e) How much get the tree plant.

    c) Private Nursery

21. Is re-plantation a must?

    a) Yes   b) No

    If yes, why?

    …………………………………………………………………………

22. How is the effect of community forest in your area?

    a) Good   c) Normal

    b) Bad   d) No effect

23. Who has the upper hand in decision making in consumer groups?

    a) Male   b) Female

    c) Male and Female both

24. Are the rule and regulations taken by Nepal Government appropriate?

    a. Yes   b) No

    If so, Why?

    ……………………………………………………………………….

25. How is the impact of community forest upon agriculture after it establishment?

    a. Good   b) Bad   c) Normal

26. Has community forest program helped in income generating activities besides forest products?

    a) Yes   b) No   c) No idea

    If yes, how?

    a) Providing skill development training.

    b) Providing improvement training.

    c) Providing training about unseasonable vegetable products.

27. Have you got any training and instruction classes?

    a) Yes   b) No.

    If yes, from where?

    …………………………………………………………………………..

28. Are the consumer of community forest management?

    a) Yes   b) No

If not, why?

……………………………………………………………………..

29. Do the people of this place participate in other activities?

    a) Yes   b) No

    If yes, what are they?

……………………………………………………………………..

30. Have you realized any problem in community forest?

    a) Yes   b) No

    If yes, how?

……………………………………………………………………..

31. Whose participation is more in community forest management?

    a) Male   b) Female

    c) Male and Female

    Why? …………………………………………………………........

32. Are you satisfied in the management of community forest?

    a) Yes   b) No

    If no, what are the reasons?

……………………………………………………………………..

33. Is community forest user group active?

    a) Yes   b) No

34. Are there any political effect to community forest?

    a) Yes   b) No

    If no, what are they?

……………………………………………………………………..

35. Does the forest area decrease or increase comparatively to the past?

    a) Decrease   b) Increase

    If the forest increase what effects?

    a) Good   b) Bad

    If bad, what are the causes?

…………………………………………………………………