

# **CHAPTER- I**

## **INTRODUCTION**

### **1.1 Background of the Study**

Over the last three decades, the development of community forestry in Nepal has been a core policy of the Nepalese government and has been progressively updated to take into account the emerging needs of local communities and the experiences of stakeholders involved in community forestry projects. Local people are involved in managing forest areas in order to fulfill their needs for forest products and, indirectly, to enhance the conservation of soil and water, whilst contributing to improving the environment. There is a traditional Nepali slogan that states: “Hariyo Ban Nepal ko Dhan”, which is translated as “Green forest is the wealth of Nepal” (Timsina, 2002).

These local systems were recognized by the Rana Government but thereafter, restricted use of forest products removed the customary rights of people to common property which then began to reduce people’s ownership of forest and to create degradation. The linkages between forest and farming systems are described by a number of authors (Gilmour & Fisher, 1996). Forest is the life blood of society for a developing country like Nepal and also a great element for human survival. It provides daily life subsistence materials and services. That is why forest and human beings have mutual relationship. It is also regarded as valuable and renewable resources (Dahal, 2008).

To address these issues and find a good solution in protecting and increasing forestland, The Master plan for Forestry Sector (MPFS) was published in 1989 as a concrete forest policy supporting the people's participation concept. This MPFS adopted the concept of Forest User Group for the management of forest in local level irrespective of political boundary. The regulations were subsequently revised after the change of the political system in 1990 and then the Forest Act- 1993 and forest policy-1995 was approved following the norms of MPFS. Thus, the name of Panchayat Forest and Panchayat Protected Forest was changed to CF managed by CF user group (CFUGs). CF are managed according to the operational plan (OP) prepared by CFUGs, approved by the district forest office (DFO). According to the

Act, CFUGs has to be established and registered at the District Forest Office (DFO) before handing over of the forest and they are self sustained institutions (Kanel, 1993).

CF emphasis a gradual shift form a highly technical "Classical Forest Management Approach" to a "Participatory Approach" which is people oriented. Community forestry in Nepal is about stabilizing a partnership between HMG and the forestry user group in which community forestry is seen as a deliberated and conscious application of business methods and technical forestry principal to help village community. People participation is the most essential feature of community forestry in Nepal. Because of mass illiteracy and backwardness it has been termed very difficult to get people's participation in forestry projects in Nepal (Gilmour & Fisher, 1989). The principle aim of community forestry in Nepal is to involve people in all stage of participation e.g. decision making to benefit sharing.

This study is aimed to analyze the socio-economic activities and changing situation of CF using group and environment sustainability through CF development program. This study is targeted to poor people for their livelihood and way of life through maintenance of environment and bio-diversity. This Dumsi -Vir community forest is located at Gorkha district of Plaumtar Municipality. This forest has various economic and environmental potentialities with having high bio-diversity maintenance. This research is targeted to identify these entire mechanisms.

## **1.2 Statement of the Problems**

Community Forestry (CF) has evolved as a management process for the last two decades with gradual shift from resources focus to institutional development. The latter enables villagers to organize into groups and assume management and regulatory responsibility. There is recent emphasis on consolidation and further expansion of community forest for community development. Thus concerns on equity, production factors income distribution and well-being of society become important in forestry discourse.

Forestry can be a suitable form of land-use only if land to labour ratio is higher but it can't be in practice. Some households may suffer losses due to no access or restricted grazing under CF while others may gain from increased availability of forest products. Will there be a net loss for the society, if compensation mechanism does not

exist? The contribution of CF to the poor is only subsistence level. Most of the research found that, similarly poor people participate in implementation phase of community forest but they are deprived in benefit sharing.

Forestry (in its narrow sense) is often not a top priority. The direct benefits from forestry are important, but are often regarded as less so than other needs (LFP, 2010). Community forest Nepal's of programme has proved to be a very encouraging endeavor in the development of a partnership in forestry between farmers and the government. The community forest program in Nepal began with the concept of fulfillment basic forest products' needs of the local community and for conserving the forest ecosystem. Community forest using group are getting increasingly involved in income generation activities, such as, cultivation of non-timber forest products, agro-forestry, and cash crops. Although many agencies, NGOs, INGOs are involved to develop and manage the community forest, not notable result is found out.

The sustainability of CF does not depend only on the formation of CF using group and handing over the resources but also the effective mechanism of handling the resources. The absence of the mechanism for an effective monitoring and regular improvement in CF casts a serious doubt on the long term possibility of the groups as wells as the overall sustainability of community forest. Therefore, this research has based on economic effect of community forestry. This study also attempts to identify the contribution made by CF using group to economic development as well as forest development activities through community development activities (CDAs) and users' willingness to utilize the fund. The study tries to answer the following questions:

- i. What are the socio-economic characteristics of user of Dumsi-Vir community forest?
- ii. What are the economic benefits from the Dumsi- Vir community forest?

### **1.3 Objectives of the Study**

The general objective of this study is to identify the economic and environmental activities through development of community forest. The specific objectives are as follows:

- i. To analysis socio- economic characteristics of forest user group in Dumsi-Vir Community Forest of Gorkha District.

- ii. To find the socio- economic benefits of Dumsi-Vir Community Forest on socio-economic and environmental life of local community.

#### **1.4 Limitations of the Study**

The researcher being the student, the time and money is very limited to cover all the aspects and area of this research so the area, subject matter and other variables were very limited. This study specially has been covered the socio-economic, environmental and women's participation of Dumsi-Vir Community forest in Gorkha District. This study was taken the selected area of community forest and its user group.

#### **1.5 Significance of the Study**

Community forestry is the most effective programme in developing economy of Nepal. It has solved many problems of the villagers by providing fuel wood, 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. Many government efforts have been under to the betterment of forest resources. However these have been no improvement and forest degradation is still continuing. So this study is essential to identify the economic effect of CF to the CFUG in forest management. This study may help to other researchers who want to carry out further study on a similar study.

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

The study has been organized in six chapters. The first chapter is concerned with the brief introduction, statement of the problem, objectives of the study, limitations of the study and significance of the study and organization of study.

In second chapter, a short account of relevant literature has discussed method and of study. The third chapter describes methodology of the study that contains research design, universe and sample size and source of data, data collection technique and tools and data analysis.

The detailed analysis and presentation of data has been carried out in the fourth and five chapters are discussed in thematic view. And finally chapter six, summary,

conclusion and recommendation of the study have been presented in the fifth chapter. On the last part, bibliography, questionnaires and annex has been included.

## **CHAPTER- II**

### **LITERATURE REVIEW**

The number of community forest is rapidly increasing day by day since the establishment of community forest policy in Nepal and the realization that the conservation of forest is the conservation of soil, water, wood, vegetation, animals, birds, insects that are elements of the whole eco-system and the bio-diversity conservation. In addition, that program is fulfilled through the development of community forest program. So, different research and studies took place on different topics and time to know the reality of community forest. Some literatures are reviewed here to know the existing status of community forest in Nepal and its economic and environmental aspects.

#### **2.1 Theoretical Concept**

The community forestry program of Nepal is considered as the common property forest management system. Because its major features are the organizations of the users, definite membership criteria, social unit, and collective interest of the people. It has applied the both formal and informal use of the common property forests by villagers in the middle hill of the Nepal. Common property forests in Nepal are forests that are not privately owned and which are locally organized as belonging to the community (Fisher, 2000).

The community forest as “that part of the national forest which the district forest officer hands over to the user groups for development, protection, utilization and management in accordance with the operational plan, with authorization to freely fix the prices of the forest products, and to sell and distribute the forest products for the collective benefit and welfare” (Government of Nepal, 2004).

The local management mechanism as FUG has evolved in Nepal as a strategy for the conservation as well as sustainable utilization of the forest to prevent the over use of the forest. It further has enabled the people to obtain goods and services that improved their livelihoods without compromising long-term values of the forest. The next widely discussed underpinning assumption under which Nepal's community forestry program has been defined is the 'bottom-up' development approach. It defined

community forestry program of Nepal is a paradigm shift from top down to bottom up. Nepal forestry change is a shift from the industrial forestry towards the Panchayat forest and Panchayat protect forest. The phrase was coined 'Forest for local community development' to accept the people first and the tree second in forest management. This rhetoric was developed with the assumption that traditional professional forestry paradigm (industrial) forestry is the barriers to the establishment of genuine multidisciplinary approach, to develop the authority of the forest management to the community (Gilmour, King & Fisher, 1991). The traditional 'top-down' forestry paradigm was an ideology supporting the 'protection' of the forest where new paradigm supports the effective sustainable management of the common forest resource for the conservation as well as for the use. Therefore, the community forestry development program in Nepal has been considered as an 'innovative' bottom-up paradigm, because it puts people at the centre of the forestry and makes everything else peripheral (Dukum & Lis, 2005).

Rest of these two theories, other theories also has emerged in different time periods. Some important theories have been briefly discussed here. The trend towards devolution and the decentralization of forest resource management responsibilities was highlighted in Nepal as devolution of the forest management and the utilization right to FUG. Decentralization and the devolution of the power is the dominant theme of the contemporary forestry policy and management discussion. Because of the failure of the centralized policy to produce the desired result, an attempt to the decentralization of the forest policy was made (Chhetri & Rana, 2007).

Devolution of the power refers to the relocating the power away from the center focal point. In the context of the community forestry of the Nepal, it describes the relocation of the administrative function or power from center location to regional and local office of the forest, local political body or to the natural user (Fisher, 2000).

In Nepal, the evaluation of the forestry policy since late 70s has encouraged the community forest management (i.e. PPF, PF, and MPFS). FUG is the example of the devolution of the power from government to the user giving high priority to the small scale utilities and use purpose of the forest rather from the economic point of view. Although macro level board policy (such as MPFS) has guided the community forestry development process, it is actually a community level FUG that is well equipped and authorized to take all decisions of the local forest like making the

constitution, operational plan and sharing of the benefit. Although the board policy has certain guideline and policy framework to guide the forest management, FUG makes suitable operational plan and constitution as according to the social structural framework of the particular community. That can bring large differences in the policy implication and practices. So, it can be fine example of the devolution of the power in the forest management of Nepal (Bird, 2000).

The devolution of the power in community forestry has emphasized upon the local people's participation in the forest management. Participation has been a catchword of the bottom-up forest development approach. The basic philosophy of the Nepal's community forestry program is people's participation (the forest should be capable to fulfill the basic needs of the people through their participation). The management policy of the forest cannot be in isolation of the people who are supposed to be benefited. Therefore participatory resource management has seen as an appropriate solution to ensure the equitable and sustainable use of the forest. To achieve this aim devolution of power or empower the local people to management their forest is the first necessary step (Neupane, 1992).

Formulation and registration of forest user groups, is the first step. This follows the preparation of forest operational plan a forest management agreement between the FUG and DFO. This plan is prepared by FUG with the technical support from local forestry technician. The district forest officer formally hands over the forest area to the FUG for management according to the operational plan. While handing over a forest as community forest, political boundaries have no effects. The FUG has the rights of collection, sale and distribution of particular forest products, which are stated in the operational plan. An operational guideline for community forestry identifies four main planning phases' investigation, negotiation, implementation and review. The planning decisions for the forest management are taken in the FUG general assembly, facilitated by the technician employee of the district forest office. The concerned forest user group, under the technical assistance from the district forest staff, implements the operational forest management plan. The user group must not take any action prohibited in the CF by the law, besides as incentives for plantation, development and protection of forest. However, subsidy is being reduced and gradually withdrawn to make the community forestry program sustainable (Regmi, 2008).



The FUG, by means of its regular meeting, monitors and evaluates its activities. It also evaluates whether the co-movements made by district forest office and other concerned development agencies are fulfilled or not. The results are used as a feedback for the amendment or improvement of the operational plan in the future. The district forest officer of the concerned district monitors and evaluates the activities of the forest user group. While doing so, he/she is to focus mainly on whether the activities performed by the user groups are according to the operational plan and government rules and regulations or not. According to the law, the user group may obtain necessary assistance from national and international, governmental and non-governmental agencies (Poudel, 2007).

The field forestry staffs motivate the local people to engage in community forestry through extension. Field level training programs are planned and implemented extensively in district and regional training centers for field's staffs, user group members and local leaders. Study, tours and workshops are organized to discuss community forestry. Extension materials are developed and distributed in the field. User groups are given opportunities to discuss ways and means of managing CFs through networking at the district and national levels. International as well as national non government organizations are involved in community forestry directly or indirectly (Sarin, 2004).

One of the millennium development goals agreed at the United Nation's millennium summit includes halving extreme poverty and hunger by 2015. Similarly, the objectives of tenth plan are to reduce poverty by means of empowerment, targeted programs to the level thirty percent. The forestry sector's objectives include assuring the people participation in the management of forest vegetation, herbs, along with business based on forest products with a view to enhance employment opportunities and alleviation poverty. As a sub sector program of the tenth plan, community forest aims to promote employment and income generation opportunities to poor and disadvantaged families. It further promotes non timber forest products under CF management; managing community forest focusing on NTFPs not only increases the income but also generates employment for its users. Community forest also helps in the development of infrastructures. Nepal's position as the least developed, land locked and strategically important country has made it a prime target for the world's lending institutions and aid donor agencies. In the forestry sector, this shifts in

philosophy and policy resulted in move away from large scale community based projects to small scale community based programs designed to meet the basic needs of the villagers. The major emphasis of most forest aid projects in the hilly regions of Nepal has been on the establishment of nurseries and plantations, the achievement of physical target and the creation of new forest resources (Singh, 2002).

It reported that many CFUG after meeting their forestry needs of fuel wood, fodder and timber have earned a significant amount of income for their group funds from the management of community forest. mentioned that many CFUG in Nepal, Australia CF protected area have used part of their income to hiring guards to protect forest, building schools and roads, establishing irrigation facilities and drinking water systems providing credits to CFUG members, connecting electricity and purchasing torch, lights to use in literacy program( Molnar, 1992).

It is shown that the CF management activities are helping community development activities by injecting funds and voluntary services. For instances, in Nepal and India, CFUG are undertaking small scale CDAs with the funds generated from community forest (Hobley, 1996). The small scale development activities could be more appropriate than sponsored activities to solve local problems. This is because local people determine their needs, seek solutions and act accordingly, such initiatives may be more sustainable than the activities run by the outside funding because continue sustained for ongoing maintenance cost (Molnar, 1992).

To sum up, according to the tenth plan, Nepal has been able to introduce itself as country of community forestry in the world. With the help of community forestry, Nepal has improved in the field of forest, environment, biodiversity and sustainable management and socio-cultural development. Through the medium of community forestry, the democratic exercise, gender equity, social justice and social improvement etc have been lunched in the local community. CF has been handed over to the local communities to improve the livelihoods of people below the poverty line (NPC, 2002).

The pan focuses on poverty reductions from the nation. In poverty reduction CF play important role. So the plan has given top priority on forest related program like CF and leasehold forest. The total percentage of forest cover area is increase from 29 percent to 31 during the time of plan. Give emphasis on climate change in relation to

preservation of forest. It make pan to maintain previous percentage of forest area and add new more forest area in hill and terai. The main focus of the plan is enhancing CF user group and leasehold forest group in the hill. According to the plan government add some more area as conservation area and give emphasis on women participation in community forest (NPC, 2007).

The latest Forest Policy, 2015 has given the stress on the appropriate civil cultural system has based community forestry management to enhance production and productivity of forest to increase financial capital which ultimately contributes to livelihood support and poverty reduction. It intends to shift community forestry from subsistence approach to commercial/market approach (Government of Nepal, 2016a).

## **2.2 Review of International Studies**

Social equity issue refers to the unequal power relation between rich and poor, high and low caste, women and men and so on. The social issue has been considered as the second-generation issue of the community forestry. The agenda of the equity has been focal point of the social issue (Winrock, 2002).

From two different reasons equity is related to the community forestry. First is the philosophical argument's community forestry is aimed to meet the need of the diverse group of the society. It must insure the disadvantaged group's people's access to by the policy level and empower them to make equal control in CFUG. The second is 'the political reason'. The program should benefit various interest groups in community. The membership in CFUG doesn't adequately represent poor and occupation caste group's participation. They have not the equal access due to various reasons (i.e. social hierarchy) in the intra CFUG activities, mainly in benefit sharing and decision-making. The issue of the intra CFUG equity is generally related to these problems (Grosen, 2006).

The word 'community' in the community forestry indicates a homogenous group having common interests. But the community members are diverse in terms of their occupation, wealth, education and the caste/ethnicity although it may be a homogenous group in terms of physical characteristics such as geography. The issue of the intra CFUG equity is very important where the members of the community are diverse in terms of the socio-cultural and economic factor. Within a community there are the groups of the people who have the same interest common characteristics in

certain thing; this is termed as the interest group (Gilmour & Fisher, 1991). With respect to even the forest management too, the identification of the needs roles and authority of all interest group within a user group is crucial to maintain the intra CFUG equity (Arnold, 2011).

Strategies to increase women's control over the local natural resource management must address the question of gender relation. To understand gender issue in forest management it is necessary to look at the gender roles and division in terms of ownership and control over and access to resource, knowledge and the product of their labour. Probably in all the societies, women have little value to men because of their subordinate social status. In the rural Nepalese society, there is no equal opportunity for the men and women in all sectors (Barkes, 1989).

When the question of the equity in CF management comes, it often gives the notion of the equal opportunity for the women, the disadvantaged and the lower caste's people. Gender and equity has been the major agenda of the contemporary debate on the people's participation in the community forestry. It is related to the gender balance participation in FUG and it basically rests on the leadership, benefit sharing, decision-making and the representing the certain interest group. Both policy and the implementation strategies and the programs of the donor agencies have focused to make better status of women in forest management and tried to make at least token participants of them in executive committees of the user groups. But nominal discussion has been made so far about the equity among the women or intra women equity. The policy seems to consider women as the single interest group as we know women as an interest group from the gender balance participation's perspective. But in reality women are not a homogenous group in every respect. Within the women they have diverse interests according to the caste, economic status, household position, educational status and age group. The woman of the user's household doesn't have the same types of access and opportunities and constraints to make the desired involvement in CFUG activities. But those minority women who have the dominant figure in the society are getting the easy access in the name of certain part of the women's representatives in FUG's beneficial activities such as training. In reality they don't represent or make it beneficial for all the women who also have the same kind of the right. The women of a blacksmith household, women of the landless household and the regular forest user women etc. are not getting a chance or getting less chance. In

the country, women of the elite class, women member of the village level figures, educated women who is not related to the forest as rest of the community women are getting the privileges in the name of the women's participation. In this way in reality the real user, poor, lower caste and occupation caste group's women have been excluded from making any meaningful intervention. Therefore securing an easy access of the all types or basically disadvantaged groups' women seems most necessary to make possible the real essence of the women's participation (FAO, 2010).

But due to the various reasons those programs were not effective and that time's political conditions also helped degrade forest. Government policy was made to control the forest from the center. The forests were over exploited and government could not stop it because of technical, political as well as other reasons. To stop the destruction and degradation of the forest, the government adopted a restrictive policy, the private forest Nationalization Act, and 1957. This Act brought a vital change in relationship between people and forest. It supposed people not as a 'manager' but as a 'destroyer' of the forest and isolated them from the forest. Through that policy all forest was technically came under the government. So people started the illegal falling of the tree and agricultural use land. Therefore this forest act was not suitable from the people's point of view and it was unsuccessful because it didn't recognize the role, authority and responsibility of people in forest resource management near their village. In the late 1970s, a new concept of forest management was introduced as Nepal national forestry policy, (NNFP) in response to the failure of PFNA, 1957 (FAO, 1993). Social/community forestry evolved with an address to concern of meeting subsistence needs of the people for firewood, leaf litter, fodder and etc. The Panchayat forest (PF), 1976 and Panchayat protected forest (PPF) rule, 1978 were people oriented forest policies. With the formulation of the PF and PPF, community forestry was implemented in twenty-nine district of Nepal with the loan assistance of the World Bank. On some hill district different donors like USAID, AUSAID provided the grant assistance (Grosen, 2006).

FUGs were defined as a group of the households using or development on forest resources. FUGs are identified by the district forest office (DFO) based on the household survey to access forest dependence. According to this Act, after the reorganization of the users, the members develop a constitution and five-year's

management and protection plan. Each FUG is supposed to make an executive committee (EC) of 10-15 members of its users. The role of the forest department is to facilitate the functionary of the FUGs and provide technical assistance as according to the necessary. Therefore this policy has provided a strategies legal framework for the expansion of the community forestry (Lindsay, 2000).

The level of involvement of the local people may be varied according to the modalities and tenure arrangements. In recent years, community CBFM has become more popular amongst the developing countries (Maraseni et al., 2014).

### **2.3 Review of National Context**

The concept of community concerns the organization of social activities to afford people daily local access to those broad area activities, which are necessary in day to day living. Community can also be defined from a sociological perspective. The word 'community' refers to such units of social and territorial organization as hamlets, towns, village cities and metropolitan areas. Hillary found that at least three major elements enter the sociological definition of community, including (i) geographical area (ii) social interaction and (iii) common tie or ties. Thus, community consists of persons in social interaction within a geographical area and having one or more common ties (Bartlett, 1992). What is about the use of the term community in the context of Nepal? The word community is used in spoken language in different ways. In broad terms, it refers to particular ethnic, religious, racial, social and economic class communities. In another way, it is also used as a unit of social and territorial organization as hamlets, villages, towns, cities, eastern areas, western areas, hills, tarai, and so forth Put simply, participation in community forestry means involvement of people in decision-making and the implementation of community forestry activities related to protection, forest development and product distribution. People participation is a continuous two-way communication process, which involves promoting understanding of the processes and mechanisms through which they are involved in planning, implementing and evaluating activities in order to fulfill their desired needs. "Participation is considered to be an active process meaning that the group in question takes initiatives or asserts its autonomy to do so (Neupane, 2005).

Experience from various community forestry projects working in Nepal in community forestry suggests that there are three essential requirements for success:

(i) empowerment of people to reach judicious and egalitarian consensus; (ii) decentralization of decision making; and (iii) creation of a participatory environment (Gronow & Shrestha, 2005). This latter requirement is one of the important aspects of community forestry that needs to be considered. Most of the efforts of supporting agencies are invested in post formation support to achieve the real participation of different levels of people in decision making. The idea of equal participation in an unequal society is difficult and this is realized by all outsiders. The solution for that could be a commitment of all sectors to help to establish mechanisms of interaction in the community. Many development workers expect initiatives from the people themselves to bring about a change in their situation. There are documented cases in Nepal of villagers developing management systems in response to the depletion of forest resources even when they had no legal authority over the land (Gilmour, 1989). A truly participatory development process cannot be generated spontaneously given the existing power relations at all levels and the deep-rooted dependency relationships. It requires a catalyst initiator who can break this circle, who identifies with the interest of the poor, and who has faith in the people. Through a process of awareness creation, indicators mobilize people into self-reliant action and assist in the building up of collective strength (Ohler, 2000).

Regarding the forest of world, this book clearly mentioned the scenario of forest globally that the world has about 3870 million hector of forests. In which 95 percent are natural forests and only 5 percent are artificial of plantations. And 30 percent of world land is under forest area. America has the largest percentage of the world forest. Two third of the world's forests are located in only ten countries. This research concludes defining the need of the conservation of forest areas (IUCN, 2000).

In this book the writers seem more concerned with community participation which is a process in which people are encouraged to realize that they themselves have the abilities, energies and some of the resources to take initiatives to improve their lives. And writers focus to the marginalized people, landless people, helpless people, disadvantaged people including women and children that these people are suffering from the various problems especially the fuel needs of women. To solve these problems and to encourage the above described people for the income generating activities and to improve their living standards through the conservation and well utilization of their own local resources, the community participation is necessary.

This approach is being fulfilled through CF projects, which requires the community participation (Kayastha, 1991).

Problems are aspirations of the local people. They have some the beliefs, which may be religious, or other else but the main tendency towards forest is resource, which is renewable. The strategies for community forestry development vary from place to place and it is used to be based on the socio-economic conditions of the community. Regarding these conditions of the community the role of the forests in fulfilling local needs must be given preference. Energy, food and shelter are urgent needs of rural people. In many of the places these needs are fulfilled by improved management of forest and by creating plantations of fast growing valuable species. Especially the main average of the forest conservation can be gained through crop production and animal husbandry. So, the forest can fulfill the daily needs of the people through well management of its resources (Shrestha, 2001).

The degradation process is of forest and it points out the elements, which are responsible for the problem. It states that one potential mechanism for preventing forest degradation is to increase community involvement in the management and ownership of forest resources and central theme of CF is returning forest resources to the local community allowing them to manage the resource and directly benefit from it. Therefore, the real consumer and preserver of forest is community approach is main element for conservation (ICIMOD, 2000).

The CF program have proved to be a successful policy initiative for addressing land on degradation problems and participation the local people in the mainstream of natural resources conservation, particularly the forests, soil water and bio-diversity resources. This program is being most successful program for the environment and economic activities, which reflects the benefits. The policies are formed targeting for ensuring proper land use planning, implementing integrated package programs that includes vegetative agronomic and water management measure as well as establishing linkages between stakeholders and networking the agriculture , forest, livestock and water resource. These all above policies or targets are liked with the CF programs (MOPE, 2011).

The progress of handing over forestland to CF user groups is remarkable praiseworthy and rewarding. Transformation of the ecosystem a result of CF is visible



in a number of districts. It has greatly benefited upon the quality of forest in terms of species composition and growth of forest is rich and valuable for bio-diversity through CF approach (Shrestha, 2002).

The importance of CF is a program. People's participation is the best way to manage and protect community forest. There are various problems to develop the CF program but there are many efforts yet to be made in this regard (Khadka, 2006).

The need of the forest conservation is the rural people are fulfilling the means of their daily food from forest. So, the CF program of Nepal has established more than 10000 community based forest user group which have significantly increased forest covering. This is the strategic effort to maintain the environment conservation and bio-diversity maintenance (CIFOR, 2001).

On the basis of changing situation of forest conservation strategy that the forests are gradually becoming to change in the countries like Nepal, India and China where original forests remains for environmental livelihood and industrial purposes (CIFOR, 2001).

CF provides a vehicle for economic development based upon local initiatives innovation and entrepreneurship. They can help employment opportunities, increase public awareness and support for forest management activities (Haley, 2002).

Both of them seems aware and have assured that the establishment of CF is the process to provide the opportunity for communities to build and strengthen their governance skill and capacity. The CF is about responsibility taken by natural resources dependent communities for managing local natural resources sustainably and equitably. And they highlight the increasing greenery, wildlife, fresh air and water through the government, forest user group enhancement of the forest contributes to beautifying the overall landscape, an attraction for tourists and recreationists which will in turn benefit the local economy (Ojha, et.al, 2007).

The community forestry program in Nepal is a global innovation in participatory environmental governance that encompasses well-defined policies, institutions, and practices. The community forestry program in Nepal encompasses a set of policy and institutional innovations that empower local communities to manage forests for livelihoods, while also enhancing conservation benefits. The program was launched in the mid-1970s as part of an effort to curb the widely perceived crisis of Himalayan

forest degradation, when the government of Nepal came to the conclusion that active involvement of local people in forest management was essential for forest conservation in the country. Nepal's community forestry program innovations encompass a well defined legal and regulatory framework, participatory institutions, benefit sharing mechanisms, community based forestry enterprises, and biodiversity conservation strategies. Community forestry appears to have had a net positive effect on livelihoods and a range of other development concerns in Nepal, resulting in direct and indirect positive benefits on rural livelihoods and welfare. However, we caution that rigorous studies demonstrating significant increases in household income as a result of Nepal's community forestry program are sparse in the available literature. Studies that attempt to further disentangle complex relationships among community forestry activities, unrelated development interventions, and economic and other aspects of household livelihoods, particularly through rigorous research designs that control for external factors, would contribute importantly to a clearer understanding of community forestry benefits on household income in Nepal (MFSC, 2011).

Community forestry in Nepal illustrates the complex and irreversible changes that community driven development efforts may bring about in the social, economic, and political fabric of society, according to an assessment by the operations evaluation department. Policymakers must carefully think through in advance the nuts and bolts of the decision-making process, the specifics of benefit sharing among stakeholders, and the implementation strategy. More than 90 percent of Nepal's people live in rural areas. Forests are especially important to the livelihoods of the landless and the poorest, which depend on fuel wood, fodder, and other non-timber products for their daily survival. Forests and shrubs occupy roughly 40 percent of Nepal's land area, about 80 percent of which is either hills or mountains. Community management has slowed the rate of deforestation in Nepal, and 15 percent of the forestland is now protected by UGs. In the mid-hills (where large forest areas are under community protection), the rate has slowed to about 0.2 percent a year. But in the Terai, forests are being depleted at an annual rate of about 1.3 percent (Dahal, 2012).

Nepal's community forestry has become an example of progressive legislation and policies in the decentralization of forest management. It has attracted international attention because in Nepal, decentralization is linked with emerging issues sustainable forest management, forest governance, policy advocacy, equity, gender, poverty and

the role of civil society in community forestry. In particular, the role of the forest user group network in legal advocacy, capacity building and the establishment of democratic governance on a wider scale shows the unique strength of the community forestry approach in Nepal. A forest user group is principally an institution where people of diverse religion, caste, gender, class and strata can participate equally. Official policies promote social inclusion. But there are still many forest user groups that have not properly followed the principle of social inclusion. For the successful implementation of community forestry, a community's poor, women, dalits and marginalized groups should participate meaningfully and equitably in decision-making (Ebregt et al, 2012).

Now, the CF has been established as a successful program to improve the forest condition and livelihood of people. Some of the crucial factors for the success of Community Forestry are dynamic and adaptive nature of the program, restructuring and reformulation of policy and devolution of authority to local communities. Supportive policy framework has been the key factor that triggered motivation of local communities for their institutional arrangement to find themselves in transformed scenario and it got the greatest impetus after government legitimized the usufructuary rights of people. The challenges such as fully empowerment of women, disadvantaged group and their role in leadership are highly prevalent and successes are not uniform throughout the country. Community forestry led devolution revolution not only within the forestry but also in other sectors like watershed management and protected area management. Due to community forestry, society has been transformed as decentralized, participatory and equitable. Due to the former kind of output from devolution, community forestry is highly touted as the successful participatory model. But, at the same time the later types of output are also equally prevalent. Therefore, higher degrees of challenges such as centralized decentralization, participatory exclusion, and not fully realization of equity, putting the last first have emerged due to lack of perfectly good governance (Ojha et.al, 2009).

Involvement of women is crucial for the success of community forestry, women are the major collectors of forest products such as fuel wood, fodder and fruits grass, and they cook and do most of domestic works. Therefore, they suffer from the social and economic consequences of deforestation. Most directly having to spend more and

more time and walk longer distances in search of this essential forest product. However, they should not be considered in isolation and total community participation should be effected (Kayastha, 1991).

If the forests to be successfully managed by local users, then women mostly participate, they are responsible for collection of the fuel wood, fodder, leaf compost bedding, as well as controlling grazing. The men, on the other hand generally take care of cutting and selling timber, and of administrative decisions about the forests (Oli et.al, 2014).

Women have worked successfully on both annexed and all female forestry committee in Nepal. Village men and women, and professional farmers generally agree that women are capable of doing committee work of learning how to do it. Women's participation will help the forests first and the women second, women will have to give to forestry before gives to them and further writes that, given that it is essential to involve in developing and implementing workable management plans, Nepalese society and the position of men and women in it, other strategies are unworkable (Siddiqi, 1989).

The recent concern of development professionals and environment activities are regarding effectiveness and sustainability of forest programs. The participation of women in forestry is being seen as essential to the advancement of women in rural community, where life and subsistence are directly dictated by nature and quality of available renewable natural resources women for forestry and forestry for women both are valid, highly desirable and non contradictory concepts (Sponsel, 2000).

Women are the main agents of natural resources management particularly in rural areas where forest is the main sources of fire wood, timber, litter and animal fodder that are mainly collected by women Nepalese agriculture system is predominantly subsistence in nature in which crop live stock and forest have very close interrelationship accretion population growth and rapid socio economic changes poses multifarious benefits on the interrelationship (Bajracharya, 1983).

The proper management of CF is mainly depends on women's participation because in rural communities they have a vital role in environment management and development their full participation is therefore essential to achieving sustainable development. It is very important to explore and understand their role in rural areas

because every rural house hold in the put is dependent on wood for cooking and heating, and on forests land for feeding domestic animals, almost all of these activates are carried out by women (MFSC, 1995).

The collection of forest product, mainly fodder, fuel wood, grass and thatches, is a woman's role in most parts of the country. In addition to the collection of forest products, women fuel wood, fodder and bedding materials, as they are primarily responsible for household chores. Being involved in the collection and management of forest resources, women have developed a traditional knowledge base about their management and utilization. Despite this, women are generally excluded in the decision-making process of CFUG. As a result, most CFUG decisions, including funds management, are made in favor of relatively wealthier households (Roe et.al, 2009).

The exclusion of women in the resource management process has serious negative consequences not just for gender equity, but also for the efficient functioning and long term sustainability of these initiatives, and for women's empowerment (Agarwal, 1997).

Women-only CFUG has created to increase women's involvement in community forestry since their participation in the decision-making of mixed-sex CFUG was minimal. Currently, there are more than 600 women-only CFUG throughout the country in which women exclusively represent the executive committee and general assembly as representatives of their household. However, a comparative analysis of 190 women-only CFUG and 1,581 mixed CFUG revealed that the average household size of women-only CFUG was 1.5 times smaller than that of total CFUG and the average forest area per household of women-only CFUG was half the average of total CFUG. Similarly, the average area of women-only CF was three times smaller than the average area of total CF (Gentle, 2003).

The community forestry in Nepal is not only the leading national program amongst various community based forest management modalities, but is also equally recognized and respected forest management strategy in the international arena. A recent survey carried out by department of forest research and survey estimated the country's forest as 5.96 million ha which is 40.36percent of the total area of the country (DFRS, 2015).

For the benefit sharing, total production of timber and fuel wood is divided in three parts proportionally. Among that 50percent quantity of timber and fuel wood goes to user group, 10 percent goes to local government and 40 percent goes to central government (MFSC, 2016).

Nepal has helps to conserve biodiversity, cultural value together with enhancing people's livelihood. However, the focus remains on the key features of that forest for which it could be declared as the protected forest. In Nepal, some of the protected forests provide linkage between different protected areas of Nepal and encompass biological corridors and bottlenecks. Likewise, other protected forests encompass some critically important features of archeological, cultural and tourism importance, and watershed conservation (Baral et al, 2016). Government of Nepal has already declared eight protected forests that cover 133,685 hectares of forest area and eight more protected forests are in process of declaring throughout the country (GoN, 2016b).

## **2.4 Research Gap**

Forests create externalities and environmental services to distance users. Devising a mechanism of capturing the external benefits for the producers of these beneficial externalities and public services would further enhance forest community forestry policy and its economic implications. Development of simple and useful valuation techniques to measure these services is a must before asking for payment for these services. Forests provide opportunities for conservation, and broad based economic growth compatible with livelihood promotion. If the higher-level decision makers recognize this relationship, forests and forestry should get priority in national development. An example of the community forestry program from Nepal indicates that community mobilization is essential for forest management and sustainable utilization, as well as for community development. It also raises many serious questions and challenges: How to link this development to the livelihood promotion of the poorer households? How to ensure that the substantial fund generated from the community forest is canalized towards pro poor programs? What about the role of enterprise development and marketing of the products so that the poor can be the proprietors and managers of these commercial and viable enterprises? Forest policies have been developed and stated in many documents over the recent decades. It is observed that forest polices and other policies coming from other sectors have

influence on the way forests are managed at the local level. How to harmonize these multiple policies and to increase the capacity of these polycentric organizations is also a major challenge in policy design. More inflation of policies does not necessarily lead to good implementation and successful results. Therefore, this paper argues that more attention should be given to the enhancement of the implementation capacity of decision makers.

## **CHAPTER- III**

### **RESEARCH METHODOLOGY**

This chapter provides the detail of the procedures adopted for the present research. The details of the research design, data collection techniques, nature and sources of the data analysis techniques and the introduction of the study areas have been presented.

#### **3.1 Study Area**

The study area of this study is Dumsi-Vir Community Forest of Palungtar Municipality-10 of Gorkha district of Nepal. This site was purposively selects for the following reasons. This area was found more appropriate for the research activity focusing on both sex's participation and their role in community forest management. This community forest is located in the accessible area closed to motor able road. It is considered as the best FUG in its protection system and implementation of operation plan among other forest in the Gorkha district.

#### **3.2 Population and Sample Size**

As the selection of the study area and the research design, the sample size was selected because not all the forest user group members can be surveyed due to the physical as well as technical problems. This CF consists of 240 households and it benefits around 850 users among 240 households only 60 households have chosen. Altogether there are 240 member households under Dumsi-Vir Community Forest a fair sample of 60 households (FUGs) were selected by using Random Sampling of Probability Sampling method. Out of the Random Sampling Method, lottery method was used for sampling procedure. Thus, the sample percentage of the universe was about 25 percent of the total FUG households. This sample size was determined purposively considering the existing literature and representation.

#### **3.3 Nature and Sources of Data**

This research is field-based study. The primary data social, economic, environmental conservation and benefit on user group through forest product and the related problems were collected through field visit. To collect these data the interview method was applied through structural questionnaires by the researcher himself.



Regarding this primary information, the secondary data as available relevant writing documents e.g. village profile, user group constitution, operational plan, publications of the District Forest Office and other related national as well as international documents, publication and report were the key information in the preparation to this project document.

### **3.4 Data Collection Techniques**

The secondary data were collected from the published and unpublished books, documents, studies carried out before related to the present topic, the constitution and the operational plan of the studied FUG. The other sources were the different government legislation, regulation, Acts, operational guidelines of the community forestry, bulletin published by the government forest office.

This study is mainly based on the primary data. The primary data was collected through Questionnaire method administered with household head or member.

### **3.5 Questionnaire**

Several interviews have been conducted based on questionnaire. Interview helped to understand the men's concept toward women's involvement, different constraints of the different groups' about FUG, socio economic benefits of existing community forest with help of questionnaire.

### **3.6 Tools and Method of Data Analysis**

Both quantitative techniques were used as corresponding to each other rather than compete or mutual exclusive to analyze the data. The qualitative method was descriptive and analytical. The quantitative data were discussed analytically based on findings. Quantitative data were systematized concerning the issue of economic and environmental activities of community forest.

## CHAPTER-IV

### SOCIO -ECONOMIC CHARACTERISTICS OF FOREST USERS GROUP

Dumsi-Vir community forest occupies part of Palungtar Municipality. Palungtar Municipality is located of Gorkha district. This forest are covered around 240 households are engaged for their livelihood. 850 number of population is directly related with the socio-economic activities of Dumsi-Vir Community Forest. This forest is considered as the habitat of all scarce animal and plants having high attitude. This forest has various economic and environmental potentialities with having high bio-diversity maintenance. All these responses can be considered that all the resources and potentialities of forest are conserved through the initiation of community forest program and quality as well as the quantity also added through this conservation strategy.

#### 4.1 Respondents by Sex

There are many households in the forest user group but only 60 head of households has been surveyed. Sex is also important in socio-economic analysis.

**Table 4.1: Distributions of Respondents by Sex**

Sex	No. of Households	Percent
Male	51	85.0
Female	9	15.0
<b>Total</b>	<b>60</b>	<b>100.0</b>

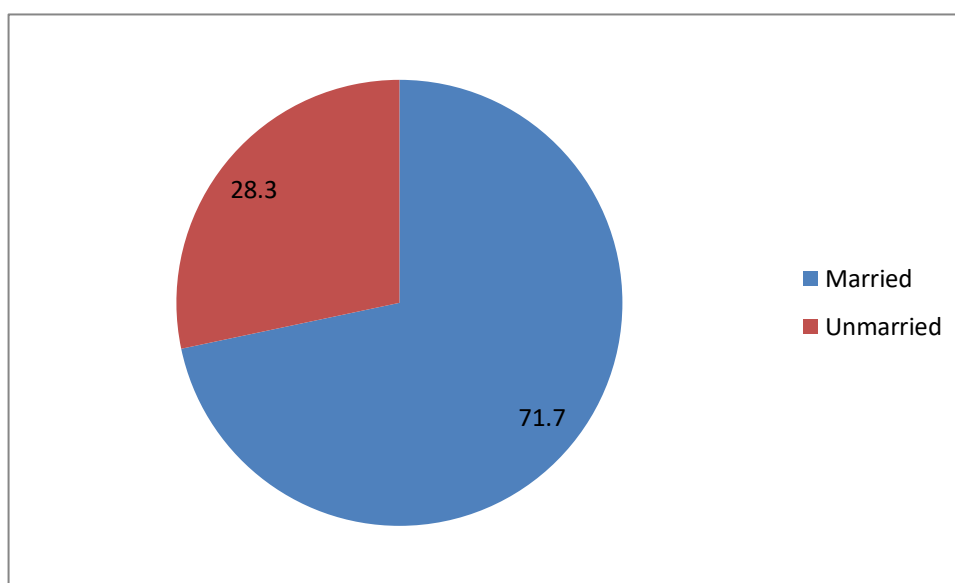
*Sources: Field Survey, 2018*

The table 4.1 shows the sex composition of the respondents. Data shows that 85 percent of the respondents are male and 15 percent are female.

#### 4.2 Marital Status

Marital status is also important in socio-economic analysis. It plays important role in this research. Field survey was taken 60 households.

**Figure 4.1: Respondents by Marital Status**



*Sources: Field Survey, 2018*

Figure 4.1 shows the marital status of the respondents. Data shows that out of 60 respondents 71.7 percent are married and 28.3 percent are unmarried. It shows that majority of the respondents are married.

### **4.3 Ethnic Composition**

Ethnicity is also important in the study of migrations as its effect economic status. Commonly economic status of the higher caste is better in comparison to others caste.

**Table 4. 2: Demographic Profile with Caste**

<b>Caste</b>	<b>No. of Households</b>	<b>Percent</b>
Brahman	16	27
Chhetri	10	17
Janajati	30	50
Dalit	4	7
Others	0	0
<b>Total</b>	<b>60</b>	<b>100</b>

*Source: Field Survey, 2018*

Through this Table 4.2 the caste composition of Dumsi-Vir community forest user group can be categorized with dominant caste Janajati where 50 percent of total FUG is covered by them. Brahman 27 percent, Chhetri 17 percent and Dalits are 7 percent.

This picture shows there are 4 castes that are being participation actively in forest resources conservation, management and consumption.

#### 4.4 Educational Status

Through the interview of respondents, the education status of the FUG is that the 40 percent of total are literate. This education situation is lower than the national education. Remained 60 percent are still illiterate that they have not access in reading and writing skill. And the illiterate FUG's educational attainment is described as below.

**Table 4.3: Respondents by Education**

Level of Education	No. of Households	Percent
Illiterate	36	60
Under S.L.C.	8	13
S.L.C. level	6	10
Intermediate	4	7
Bachelor	4	7
Above Bachelor	2	3
<b>Total</b>	<b>60</b>	<b>100</b>

*Source: Field Survey, 2018*

The table 4.3 is that the 60 percent of total FUG are illiterate, 13 percent are under S.L.C. and 10 percent have just passed S.L.C., 7 percent have passed intermediate level, 7 percent have passed bachelor and 3 percent have passed above bachelor. This scenario of education shows the unsatisfactory condition and the wave of education is being speeded slowly in this area.

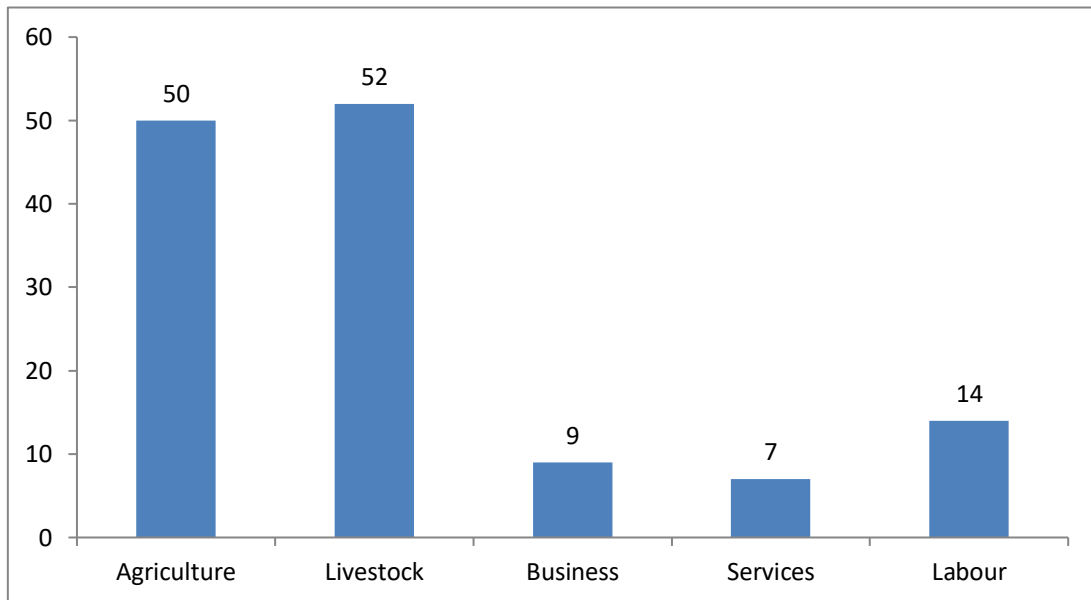
The other mechanisms at FUG are common as all rural communities have. The family type of FUG is both nuclear families. The main occupation of this FUG is agriculture and livestock farming. The role of traditions and cultures in this community seem very vital.

#### 4.5 Economic Activities of DVCFUG

There are various types of occupation of FUG of this forest, which relates in income generating activities. The economic activities include both non-forest and forest product activities, which help to FUG by providing economic support in their daily

life. The occupation of FUG, distribution of land, farming type and their relation with forest is clearly defined below which shows the development and economic activities with the development community forest. The support of CF is highly contributed in economic activities of Forest User Group. The economic activities are described below.

**Figure 4. 2: Percentage Distribution of Occupational Status**



*Source: Field Survey, 2018*

Some of the respondents have ticked more than one option of item.

As all rural people's occupation this DVCFUG occupation is also devoted to agriculture and livestock farming where all respondent do this activity of fulfill the hunger of stomach and one of them is doing for commercial purpose. Figure 4.2 in business sector there are only 10 percent and 7 percent are engaged in service. 20 percent of total FUG also labours for additional income source. Other occupations expect agriculture and livestock are being done simultaneously with farming. Agriculture and livestock farming are main occupation of them. And pasture land is another variable of livestock farming. These all variable are being fulfilled by their forest through its main potential aspect. As rural life require all the equipments needed for livestock management and agricultural practices are grants of forest. So we can claim that the community people of the Forest User Group gave the intimate, relationship with forest for their farming procedure.

#### **4.6 Using Pattern of Community Forest**

All the respondents believe that they are using this community forest for agriculture, livestock farming and for other resources. Irrigation process is also maintained through this forest for the related community. Other resources as timber, house roof material, firewood compost manure, coal and medicinal herbs are the main products of this forest, which all forest using group are getting well. All things are providing to all forest using group for economic benefit. Main economic activities are related with these forest products. These activities signify about the daily activities of common rural people. Most of the people are getting the main materials as firewood for fuel, fodder for livestock and compost manure for fertilizer purposes denoted the main role in domestic life. Forest using group claims that their agricultural farming is increasing through the development of community forest.

#### **4.7 Time Matter**

All of the respondents replied in the question about time that it is saved and become easy in availability of materials and distance is quietly changed that the potentiality of forest products is becoming richer and richer. The time is saved due to easiness to collect the above-mentioned things for their daily domestic lives. Particularly time is saved in firewood collection, manure collection and fodder collection. The save time is being use in various income generation and other domestic purpose. The alternative economic activities can be generated or launched through the saved time. Therefore, time is vital factor for many activities or particularly in economic activity.

#### **4.8 Types of Livestock Farming**

As having main occupation is agriculture, the general types of livestock are found here. The forest using group is not more conscious in commercial farming but they are adopting the traditional method of farming. The livestock types are cow, ox, buffalo, and goat. All respondents use to farm their animals. Some are engaged in goat, pig, chickens as the main additional source of income. These economic activities are being done very traditionally with traditional means of production and method.

## 4.9 Types of Crops

As livestock farming, the crop farming of Forest User Group and community is also traditional. Only 10 percent people use to farm with improved breed. Most of respondents do not use the modern way of production. 20 percent people are chemical fertilizers and rest of them uses compost manure. Basically, the major crops of the farming are rice, maize, oil based, *Dal* based crops. These crops are considered only the means of food for domestic purpose of respondents. These crops are fulfilling the demand is food directly or indirectly to the people. These agricultural activities are being done only for the purpose of food or to fulfill stomach but not for commercial purpose. These are the basic farming varieties of this forest user group.

## 4.10 Relation between Farming and Forest

All of the respondents claimed that there is much relation between forming and forest. They additionally identified that without forest there is not possibility of existence because all the activities of daily life are associated with livelihood. Way of living and source of living are being exercised in this forest by FUG. Especially agriculture and livestock farming is highly attached with forest. Farming is associated with forest in the case of that the agricultural resource of variables as nutrient components. Water source, organic manure, and other fertilizer components are being fulfilled through this forest. So this forest is supposed to be contributor of agricultural farming. The fodder manure is another potential aspect of forest for livestock farming.

**Table 4. 4: Fodder Need Per day of Forest User Group**

Amount of Fodder (in Bhari)	No. of Households	Percent	Average
1-2	18	30	3.16
2-3	8	13	
3-4	14	23	
4-5	16	27	
Above 5	4	7	
<b>Total</b>	<b>60</b>	<b>100</b>	

*Source: Field Survey, 2018*

Table 4.4, FUG the actual need of fodder to them is in average 3.16 Bhari per day. Where 30 percent people need 1-2 Bhari, 13 percent need 2-3 Bhari, and 23 percent

need 3-4 Bhari, 27 percent need 4-5 Bhari and 7 percent need more than 5 Bhari. Except CF another required fodder, is fulfilled through their land. In rainy and summer season, their own land became successful in providing much fodder and the rest of these seasons, the CF is responsible for it.

**Table 4. 5: Firewood Consumption of Forest User Group in last Year**

Amount of Firewood(in Bhari)	No. of Households	Percent	Average
50-55	6	10	65
55-60	10	17	
60-65	16	27	
65-70	18	30	
70-75	4	7	
Above 75	6	10	
<b>Total</b>	<b>60</b>	<b>100</b>	

*Source: Field Survey, 2018*

Table 4.5 shows that the economic activity related to firewood of FUG is being exercised in high manner that annually each household is taking 65 Bhari in average. Similarly, 4182 Bhari is required every year from the community forest. 10 percent as respondents are taking 50 to 55 Bhari and 17, 27, 30, 7 and 10 percent FUG are taking 55-60, 60-65, 65-70 and above 75 respectively. These sorts of economic attachment are highly associated with forest.

**Table 4.6: Forest Product Resources Based Industries**

Types of Industries	Number of Industries	Percent
Furniture	12	20
Iron Based	6	10
Bamboo Based	18	30

*Source: Field Survey, 2018*

Table 4.6, the FUG is involved in these sectors except agriculture and livestock farming for their better income. This table shows the income generating activities, which are exercised by FUG with the conservation and utilization of community forest. The source of materials for their home industries is this community forest. 20 percent are involved in furniture industries. 10 and 30 percent are involved in Iron



and bamboo based industries respectively. This involvement of FUG shows the economic activities are being exercised through the development of community forest. These are other productions of CF except above mentioned materials which belong to economic matters. Respondents are getting these materials from forest also denoted economic benefit through these materials.

**Table 4.7: Consumption of Additional Source of Forest User Group**

<b>Types of Materials</b>	<b>Number of Additional Sources</b>	<b>Percent</b>
Medicine	20	33
Vegetable	14	23
Fruits	6	10

*Source: Field Survey, 2018*

Some of the respondents have ticked more than one option of item.

Table 4.7, the materials i.e. medicinal herbs, fruits and vegetables definitely belong with economic activities and are most essential things for rural people, where 33 percent of respondents are taking medicinal herbs through this forest and 23 percent of respondents are getting vegetables through it. And only 10 percent of people are taking fruits. Vegetable is the main potential product of this forest, vegetable and tama, niuro, tusa and mushrooms can be used for sale as additional income.

#### **4.11 Bio-diversity of Dumsi-Vir Community Forest**

According to the respondents of Dumsi-Vir community forest, the management and maintenance of bio-diversity of forest is highly improved after the adoption of CF program. Different types of scarce species including plants and animals are conserved highly.

In this forest, the species of plants, which support to fodder or fodder product varieties, are around 40. The timber products species are 45 and the plants varieties of vegetable and fruits consist around 10. The main plant varieties, which are considered as scarce are the medicinal herbs found in this forest. From these, varieties, Chap, Patla, Amala, Kholma are the scarce species, which are found in this forest. There are around 30 species of fauna including both animals and birds around 17 species of birds and 13 species of animals are found in this forest. From these species Dhukur, Sal and snake are endangered species, which are found in this forest.

**Table 4.8: Process of Participation in Bio-diversity Conservation**

<b>Process of Conservation</b>	<b>Number of in Bio-diversity Conservation</b>	<b>Percent</b>
Planting tree	50	83
Boundary	60	100
Making Aware	42	70

*Source: Field Survey, 2018*

Some of the respondents have ticked more than one option of item.

Table.4.8, FUG participation in forest resource management seems very effective through various processes such as planting, blundering and making people aware. Where 83 percent respondents are participating in planting process, which helps for better resource management, and 100 percent are helping in boundary making activities. 70 percent respondents are participating in awareness making process to people and each member of community. These processes to protect bio-diversity are best methods. These activities are helping bio-diversity conservation in better way.

**Table 4.9: Types of Plants in Forest**

<b>Types of Plants</b>	<b>Percent</b>
Timber Product	50
Non-timber	25
Medicinal Herbs	15
Fruits	5
Vegetable	5
<b>Total</b>	<b>100</b>

*Source: Field Survey, 2018*

Table 4.9 shows, respondents are aware toward plans for planting seems normal because 65 percent plants are common and only 35 percent scare. Another great aspect of forest bio-diversity is there are various types of plants. The timber producing plants cover 50 percent where fodder (non-timber product), medicinal herbs, fruits and vegetable product, cover 25, 15, 5 and 5 percent respectively. This table shows balance among all resources.

#### 4.12 Affecting Factors and Constraints in Bio-diversity Conservation

Bio-diversity conservation is very complex matter in it itself needs balance natural habitat. As this fact the natural calamities always disturb this mechanism and result bad effects in bio-diversity conservation various affecting factors which affect the bio-diversity conservation of this forest are floods, natural disasters, cultural traditions etc. 50 percent factor is flood and 30 percent goes to natural disaster. Remaining 20 percent is responsible with cultural and traditional matters.

As the affecting factors there are some constraints of trees, which are seeds, nursery protection management. Where 30 percent is related with seeds and 20 and 50 percent is related with nursery, protection and management. These are main factors and constraints in Bio-diversity conservation.

#### 4.13 Cultural Relation with Forest

Apart economic and natural environmental activities, the social environmental activities are also related with this forest. As the respondent are presentations as their ideas and through this report supposed as the following symbol of God.

**Table 4.10: Socio-Cultural Relation of FUG**

Types of God	No. of Households	Percent
Kuldevata	36	60
Sansari Devi	40	67
Bhagawati	30	50

*Source: Field Survey, 2018*

Some of the respondents ticked more than one item.

Table 4.10, the respondents are highly attached with cultural and traditional activities to this community forest. 67 percent of the totals FUG are supposing this forest as Sansari Devi, 60 percent are worshipping as Kuldevata and 50 percent are worshipping Bhagawati.

## CHAPTER - V

### SOCIAL ECONOMIC BENIFTS FOR FOREST USER GROUP

It is to be noted that the benefits that are accrued from community forestry can be categorized as direct and indirect. Most of the benefits from community forestry are in indirect form and is difficult to estimate in monetary forms.

#### 5.1 Income of Respondents

Most of the benefits from community forestry are in indirect form and is difficult to estimate in monetary forms. Even though some incomes are distribution as follows describe.

**Table 5.1: Respondents by Annual Income**

<b>Annual Income</b>	<b>No. of Households</b>	<b>Percent</b>
0-50000	8	13.3
50000-100000	12	20
100000-150000	21	35
150000-200000	10	16.7
Above 200000	9	15
<b>Total</b>	<b>60</b>	<b>100.0</b>

*Sources: Field Survey, 2018*

Table 5.1 shows the annual income of the respondents. Data shows that 13.3 percent earn up to 50 thousand and 20 percent earn 50 to 100 thousands. In the same way, 35 percent earn 100-150 thousand and 16.7 percent earn 150 to 200 thousand. Only 15 percent earn more than 2000.

**Table 5.2: Respondents by Expenditure**

<b>Expenditure</b>	<b>No. of Households</b>	<b>Percent</b>
0-50000	14	23.3
50000-100000	7	11.7
100000-150000	25	41.7
150000-200000	8	13.3
Above 200000	6	10.0
<b>Total</b>	<b>60</b>	<b>100.0</b>

*Sources: Field Survey, 2018*

Table 5.2 shows the annual expenditure of the respondents. Data shows that 23.3 percent spend more than 50 thousands and 11.7 percent spend 50-100 thousands. In the same, 41.7 percent spend 100 to 150 thousands. 13.3 percent spend 150 to 200 and 10 percent spend more than 200. It shows that most of the respondents' expenditure is higher than income. They spend in education, cloths, celebrating festivals.

**Table 5.3: Respondents by Saving**

<b>Annual Saving</b>	<b>No. of Households</b>	<b>Percent</b>
0-20000	16	26.7
20000-40000	28	46.7
40000-60000	7	11.7
60000-80000	6	10.0
80000-100000	16	26.7
Above 100000	3	5
<b>Total</b>	<b>60</b>	<b>100</b>

*Sources: Field Survey, 2018*

Table 5.3 shows annual saving of the respondents. Data shows that 26.7 percent save up to 15 thousands and 46.7 percent save 20-40 thousands. In the same way, 11.7 percent save 40-60 thousands and 26.7 percent save 60 to 80 thousands. Similarly, 5 percent save 80 to 100.

## 5.2 Social Benefits

According to the respondent, the villagers themselves managed the forest before the government nationalized it. During that time, the density of the population was very small and resources were abundant, so there was no higher demand of forest products. After nationalization, the government itself started to manage the forest through the forest guards. Then people were restricted to collect the forest resources. As a result, they began to use forest resource in illegal ways. Therefore the condition of forest became worse day by day. The villagers nearly cleared the forest and forest resources either by encroachment of the forest land or illegal cutting of green timber for earning money by selling them in the local market. As a result, the forest resources were nearly finished and villagers started to collect firewood from the nearby forests which were nearly hours walk from the study area.

It was found that the people of the study area depended upon the forest resources for their livelihood. They had made rules and regulations to manage forest which is known as constitution and operational plan. In the beginning, CF constitution and operational plan was formulated in the presence of local people with the help of district forest officers. It was informed that at that time, only male members were involved. They made an operational plan for forest management and utilization such plantation, thinning and pruning, collection of fodders, leaf-litter and firewood. Within the field visit it was found that all the users had followed the rules and regulations strictly. They had formulated different rules and regulations for different kinds of resources which are described below briefly. If anybody went against the rules and regulations, he/she will be punished.

Cutting down green trees for firewood was strictly prohibited for the users in the community forest. They had allowed collecting dry twigs of trees at any time. There is no restriction on the collection of dry firewood collection. The thinning and pruning activity is held in every winter season in each block. During this time, the users distribute the firewood that came from thinning and pruning activities on the basis of equality.

The collection of fodder was strictly prohibited at all times from community forest. It was only opened for the users twice a time in a year. In winter season, forest is opened for fodder collection for 15 days. It is not allowed to collect timber from

community forest. However, timber is given only to those users who need to construct or repair their house. There was no evidence of timber distribution to the users group in the study area till the field visit time. In the study area, plantation of seedlings is usually held in Jun and July. Seedlings for plantation were provided by the district forest office and other NGOs. The committee had planted various kinds of plants on the decision of managing committee.

In this study area, the committee had organized thinning and pruning activities each November. During that time, they removed useless twigs of trees and unnecessary seedlings for the proper growth of the trees. The operational plan declared that only one third twigs were allowed to be removed from the trees.

The fund of CF came from the entry fee, punishment fee, donation etc. which were kept in the bank in the name of secretary and treasurer. They used that fund to manage the forest and other local development activities. It was informed that they used 75 percent fund of the total fund for the development activities such as road construction, temple construction etc. whereas 25percent of the fund was found to be used for forest management.

Availability of forest products such as fuel wood, timber and leaf litter, fodder grasses, bedding material, medicinal herbs and plants are taken as direct benefits. The valuation of timber, grasses leaf litter is carried out according to the prices fixed by the FUG. The direct benefits obtained from community forestry are:

The community forestry has highly contributed to increase the forest products such as grass, leaf litter, firewood, fodder, medicinal herbs and poles. The user group has accumulated the significant amount in its community fund form its indigenous forest management and this fund is used for the community welfare.

The indirect values of CF refer to social and environmental goods and services that the CF provides forest degradation and destruction might imply the loss of many of these environmental benefits although the extent of loss would depend on the subsequent land use environmental benefits might include a decrease in social erosion; reduce downstream flooding, increase in forest cover increase in soil fertility, improvement in water sources, increase in numbers and diversity of birds and wild life and increase in biodiversity. Employment generation, the establishment of an

organized FUG and social integration might be some of the social benefit. Mostly, the indirect benefits are as follows:

Community forestry prevented soil erosion. It provides catchments protection. The villagers have constant source of water for irrigation which was not available prior the implementation of community forestry programme. The forest is being dense and dense every year and people have got provision of fresh oxygen. Thus the forest has played important role in the balance of ecosystem.

Mechanism of encouraging and farming user's group are committee, thus building up social capacity for rural development. After the establishment and unification of the community forestry, people are united to tackle every type of social problems through mutual co-operation.

People are mainly depended on agriculture directly indirectly because of predominance of agro based economy in our country and so are in the study area. There are 60 percent of people are engaged on agricultural agriculture. It is very necessary to uplift the condition of agriculture, use of modern technology and fertilizers 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.

Community forest is popular and comparatively successful program of Nepal which emphasis on conservation and optimum use of forest products for their economic development . It is related to conversation and economic upliftment because farming and animal husbandry is fully depends on forest. In this chapter it is analyzed the existing CF management system, local people participation, mainly women participation and problems of CF to maintain conservation.

### **5.2.1 Economic Changes Brings by Community**

Community forest support farmers by providing fuel, foddors and grass for domestic animals. Before and after establishment of community forest there found various Changes which describes as follows.

#### **Positive Change in Income**

CF and buffer zone rings various programs which brings changes in income o f the respondents. The following table shows the situation as;



**Table 5. 4: Positive Change in Income**

<b>Positive Change in Income</b>	<b>No. of Households</b>	<b>Percent</b>
Yes	45	75
No	15	25
<b>Total</b>	<b>60</b>	<b>100</b>

*Sources: Field Survey, 2018*

Above table 5.4 shows the view of respondents on economic benefit of community forest. 75 percent of the respondents feel positive change in income whereas 25 percent have not felt positive change in income. It shows that majority of the respondents feel changes in income status.

### **Positive Change in Animal Husbandry Pattern**

After lunch CF program in study area respondents enhance their capacity of keeping domestic animals like goats, cows and buffalo.

**Table 5.5: Positive Change in Animal Husbandry Pattern**

<b>Positive change in animal husbandry pattern</b>	<b>No. of Households</b>	<b>Percent</b>
Yes	50	83.3
No	10	16.7
<b>Total</b>	<b>60</b>	<b>100</b>

*Sources: Field Survey, 2018*

Similarly some people are getting loan from DVCFUG to start poultry farm, animal husbandry, bee keeping etc. Above table 5.5 shows that 83.3 percent feel positive change in animal husbandry pattern and 16.7 percent have not felt any change in animal husbandry pattern.

## **5.3 Income Generating Activated through Community Forestry**

### **5.3.1 Forest Based Enterprises**

Micro enterprise development based on local resources/CF resources and skilled is a good option to lift the poor out of poverty and for generating income and employment at household and /or community level. It has been realized from field experience that CF had immense opportunities for creating and developing forest as well as forest based micro-enterprises.

**Table 5. 6: Forest Based Enterprises**

<b>Name of Enterprises</b>	<b>Number of Enterprises</b>	<b>Households Involved</b>	<b>Persons Involved</b>
Furniture	2	-	8
Sal leaf plate	-	4	4
Beehives	10	10	-
Aaran	1	1	2

*Sources: Field Survey, 2018*

More than one dozen household/persons have got employment and involved in income generating activities through the community forest. But it has not taken significant contribution of enterprises. People have taken advantage more by the bee hives and furniture. A Kami house has a traditional Aaran (Agricultural Equipment by Iron).

### **5.3.2 Revolving Fund to the Income Generating Activities**

Revolving fund is established in CFUG to provide soft loans to the poor/local people. Income generating activities are generally selected by CFUG based on the interest of the borrower and market opportunities.

**Table 5. 7: Revolving Fund Disbursements**

<b>Fund Utilization</b>	<b>No. of Households</b>	<b>Percent</b>
Domestic Purpose (For basic needs)	8	27.6
Keeping goats, pigs, etc.	17	58.6
To pay loan	4	13.8
<b>Total</b>	<b>29</b>	<b>100</b>

*Sources: Field Survey, 2018*

Table 5.7 is found that only local users have taken fund for domestic purpose (27.6percent), keeping animal (58.6percent) and paying loan (13.8percent).

### **5.4 Social Benefits**

Community forestry activities are launched in the community. It provides the benefits to the living in this community. Some of the social benefits of Dumsi-Vir community forestry are as follows:

### 5.4.1 Strengthening Organization

Mechanism for encouraging and forming are user group committee, thus building up the social capacity for rural development. After the establishment of the Dumsi-Vir CF, people are united to tackle every type of social problems through strong organization. Participation of the poor, disadvantaged people, women and Dalit in CF is the most social achievement. Structure of the CFUG is given below:

**Table 5.8: Dumsi-Vir CFUG's Organization**

Type of Organization	Female	Male	Total
General assembly	-	-	60
User's group	4	7	11
Executive committee	1	4	5

*Sources: Field Survey, 2018*

### 5.4.2 Employment Generation and Poverty Reduction

Through the Dumsi-Vir community forestry has not launched any significant income generation activities but it has initiated some programmes to the rural poor people for their upliftment by distributing goats, pigs and loan without interest selecting very poor person of the community. Similarly *Tejpat* and vegetables production, goats, bees and pigs keeping and nursery building have been begun for two years which helped to generate income and employment opportunities to pro-poor, disadvantaged, and lower casts groups which helped their poverty reduction.

### 5.4.3 Co-operation among People

The sustainable supply of forest product (firewood, fodder, timber) helps people not to quarrel. Conflicts come due to shortage and the sustainability helps to live people in harmony, People in this village have united to increase the economic status, preservation, proper utilization of resources and efficient co-ordination among the user group members.

## 5.5 Economic Benefits

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 resources and proper management of these

resources in the CF has provided the significant economic benefits to the users. Some of the economic benefits derived by the Dumsi-Vir community forest user groups are as follows:

#### **5.5.1 Availability of Forest Products:**

Dumsi-Vir community forestry has highly contributed to increase the forest products such as grass, leaf litter, firewood, fodder, medicinal herbs and poles. The user group has accumulated the significant amount in its community fund from its indigenous forest management and this fund is used for the community welfare.

#### **5.5.2 Sustainable Collection**

It is found that FUG in Dumsi-Vir community forest has been able to protect, manage and utilize the forest resources sustainability. Such as CFUG harvests timber, fuel wood and fodder generating economy. Forestation, reforestation and thorny wire covered around the forest by CFUG because helpful to increase the livestock rearing which is very important to increase the income of the local people.

#### **5.5.3 Multiplier Effect**

It is expected that surplus of fuel wood, timber and other non-timber forest products from community forest can help the users to enter into market economy. This will bring a significant multiplier effect in community forestry by increasing further job opportunities for the rural people such as, increasing in job opportunities, increasing the income, consumption, saving and living standard of the people. Such opportunities are not found enough in reality till 2006 A.D. Expectations are limited only in the constitution of the Dumsi-Vir community forest.

### **5.6 Forest Product Collection and Distribution**

Fuel wood, pole, fodder, grass, leaf litter and timber are the main forest products for the user's domestic purpose. The collection and distribution rules for these forest products are outlined in the forest users group's constitution and forest operational plan as follows:

#### **5.6.1 Fuel Wood**

Fuel wood is collected from singling, pruning and thinning operations that is carried out every year in one of the management block. Green fuel wood collection other than these operations is strictly prohibited. According to the operational plan, each

household is required to send one person to carry out community cultural operations. The product fuel wood is distributed equally, along with the 100 rupees charge, to each of the households. In addition, user can collect dry twinges and branches from the forest at the Paush and Magh months of the year free of charge.

### **5.6.2 Timber and Poles**

The FUG committee carries out needs assessment of the users and provides up to 30 cubic feet of timber and a few poles to those who particularly need timber and poles for house and shed construction and maintenance. For this, users are charged Rs. 15 per cubic feet of timber and Rs. 2000 per pole. These prices are set by the FUG committee to be lower than those of the free market (where timber costs about Rs. 40 per cub.) on the understanding that members use the materials for their domestic needs rather than selling them on. Besides the private purpose, the timber and poles can be given to people who are suffered by natural disaster i.e. landslide, flood, fire and so on with free from the charges. If the society needs timber and poles for social infrastructure development such as electricity, schools, hospital, road construction, timber can be used without hampering the condition of forest or as per the operational plan.

### **5.6.3 Free Fodder**

User can collect fodder from CF and other forest product free of the charge only in the Baishak, once a year. One person of one household is permitted to collect fodder in a day. During rainy season, users are not allowed to collect fodder.

### **5.6.4 Forest Protection**

The forest is protected from the fire setting, cattle grazing, illicit felling of trees and collection of forest products such as medicinal herbs (harro and barro) and other raw material through a strike system of forest watching. Although there is not the forest watcher, all the users themselves patrol the forest. There is the provision of punishment to those who are found in the forest illegally. Rupees were collected from such punishment is added into the fund of user group.

## **5.7 Problems of CF Development**

Whenever a community based programme is initiated its success hinges on the participation, coordination motivation and satisfaction of the people as a whole.

Therefore, to make the CF programme successful, everybody in the community must know the sacrifice, benefit and its prospect for further development. This can be possible if the programme is democratically, administered, people oriented and technical feasible.

The main problem of community forestry is conflict and lack of coordination among the people because of the diverse ethnic groups, political ideology, gender and socio-economic pattern. Conflicts can occur when people have different views or perception on an issue, when some one's interest is not considered or fulfilled when decision is made or when other's interest is encroached up on. These conflicts can be between individuals within a group, between institutions. In Dumsi-Vir community forestry, conflict arises at the time of limitation about sharing of benefits but it was resolved sooner. Now, after the restoration of democracy, conflict is political rather than socio-economic between users. People with different political ideology cannot sit under the same roof. This can be solved if people try to forget their political ideology for the common benefit of their village. This is a serious problem of Dumsi-Vir community forestry. Other problems of community forestry are technical. They can solve by external assistance.

### **5.8 Effectiveness of CFUG**

The effectiveness of CFUG is function or role based on the perception of the users. Some of the users can take more advantages from CF and they become satisfaction of the CFUG role and others oppose to the user group. The perceptions of the users are mentioned on the following table:

**Table 5.9: Perception of the Users**

<b>Description</b>	<b>No. of Respondents</b>	<b>Percent</b>
Very good	10	16.7
Good	15	25.0
Fair	8	13.3
Satisfactory	27	45.0
<b>Total</b>	<b>60</b>	<b>100.0</b>

*Sources: Field Survey, 2018*

Majority of the respondents (45percent) are not satisfied with the work of CFUG. Only limited number of the respondents (13.3percent) supported to the CFUG function. And rest of them is neither satisfied nor unsatisfied. So, according to the majority of the respondents there do still exist some problems. Which should be solved for the successful gain of users?

Basically respondents made some baseline before saying good or bad. They are resource mobilization. Forest condition, community participation, development activities, awareness, motivation and measured the effectiveness in terms of increasing/decreasing forest condition/diversity as well.

## CHAPTER- VI

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 6.1 Summary

After the various activities to the forest sector, the government realized that the real owner of the forest is the community people where they were supposed as the destroyer. From this realization, the government acted the policy, which is community forest program. This program is being speeded all over the country and is being the good example of community development approach. This program is focused on participate all local people including, minor, marginalized, and excluded class and disadvantage groups. This focus is helping to fulfill the livelihoods of people.

As the economic potentialities, the main another potential aspect of forest is to maintain the environment. All the environmental factors of this earth is associated with forests. Forest performs the various activates as protective, regulative, regulative and constructive. The soil conservation, water cycling process eco-system and bio-diversity aspects and all other aspects to strengthen and regulate the human life as well as biological existence, forest is considered the key factor.

Various research and literatures have discussed related to CF to know the economic potentialities and environmental potentialities of forests. Through the literature review, the concept of community forest, user group, economic activities, environmental activities, and bio-diversity conservation and its benefit on user group and community were reviewed.

This Dumsi-Vir CF is located at eastern part of Gorkha district in Province 4. This forest has around 240 households are engaged for their livelihood. 850 people are directly related with the socio-economic activities of Dumsi-Vir Community Forest. This research gathered information and data through field visit of this research unit area. The main research objectives were to identify economic activities to DVCFUG, to analyze the FUG participation in bio-diversity conservation and to identify the benefit of this forest on socio-economic and environmental life of local community. Most of the FUG is illiterate. After handling over forest to user group, this forest has



typically changed in various matters, so the resources capacity became high. The occupation of FUG is mainly agriculture; livestock farming, business service and some of them do labour. This forest is being used in various matters as firewood, fodder, compost manure, house roof material and timber. Except these materials various home based industries are running with the help of this forest like, furniture, iron based and bamboo based. The source of vegetable, fruit and medicine is also acquired through this forest. To collect these things the expenditure of time has typically changed that the time saved in various matters after initiation of CF program. Actually, the economic activities of DVCFUG with forest are considered.

Regarding these activities, some environmental friendly behaviors are also exercised that the maintenance of bio-diversity is becoming very successful through this community forest. Various scarce plants and animal are making the habitat to this forest. The process of participation bio-diversity conservation of FUG seems satisfactory through planting, making boundary and making aware to community people. There are various types of plants in forest including timber, non-timber medicinal herbs, fruits, vegetable products.

Except these characteristics, there are various obstacles, which are being the main problem to this forest for better conservation and management. The cultural and traditional FUG is taken this forest for their cultural image. These are the main findings of this research concerning this community forest.

## **6.2 Conclusion**

As the research target of this study various economic benefits and environmental behaviors are being formulated by FUG to this forest. The FUG of this forest are from Brahman, Chhetri, Janajati and Dalit back rounds where most of them are illiterate. The extended family type is dominant in this community. The user group prioritizes various cultures and traditions. After initiation of CF program, this forest is quietly changed in various matters as in forest thickness, natural beauty, storages of resources and conservation of biodiversity. The occupation of FUG is mainly agriculture and livestock some of them do business and service. For additional income source some of FUG are doing labour activates in various sectors.

The main economic activities of FUG in this forest are particularly agricultural, livestock farming and other home based industries. The entire FUG is involved in

agricultural and livestock farming with the help of fodder, irrigation channels, compost manure, fuel wood and other resources from this forest. With the support of these things agriculture and livestock, farming is getting success. Other economic activities related with forest as the home-based industries signify economic activities of FUG with the help of community forest. Iron based, furniture and bamboo based industries are making based to this forest for raw materials which are indicator of economy and are also acquired for additional income from forest. These are main findings of this research. Another aspect of this research is the environment of forest. The bio-diversity is being conserved very effectively through various activities. Except these relations, the social relation with this forest of FUG is highly attached where most of them are worshipping as incarnation of God. The problems are very general which are being obstacles in fostering various economic activities. Thus, there are main finding of this study.

### **6.3 Recommendations**

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

- Forest management is the process of managing forests to achieve one or more clearly specified objectives of management with regard to the production of a continuous flow of desired forest products and services, without undue reduction of its inherent values and future productivity and without undue undesirable effects on the physical and social environment.
- This is the longer term objective of CF but the rural community also depends on the forest for short-term benefits. For this purpose, the FUG needs to consider the following Points:
- A site-specific operational plan is required for optimum and wide use of forest land for the benefit of users, e.g. product mixes including NTFPs and grasses. Where possible, the harvest level should be set for each main timber or non-timber product.
- Institutionalized and capable, FUG, Enhancing, sustainable CF management, Series of products benefit, Economic regeneration, Community development and Development of social capital.

- Simple and practical forest resource assessment methodology needs to develop where users also participated and OP should be based on the resource condition and needs of users.
- Management of forest resources for multiple use or different product mixes should consider the diverse needs of different categories of users. Emphasis should be placed on desirable and site-suitable seedling production in the FUG nursery and on the promotion of natural generation.
- Managing CF should look beyond the basic needs requirement i.e., towards generating financial, physical and social capital.
- The establishment of a participatory implement of plan, monitoring and evaluation system for forest management is a crucial aspect of CF so that the production and use.
- Alternatives on the daily needs must be forwarded which are taking from forest. The current trend of using resources leads loss of resources, so the alternatives will minimize in resources use.
- Women participation is very low so increase women participation.
- Ethnic dispute with Dalit must be eradicated through effective participation strategy.
- There are some distributional disputes among FUG members. So these activities or disputes should be avoided through equal distribution of forest resources and products.
- Other economic activities related with CF products ought to be launched on the basis of economy where it is possible.
- User group of this forest has no sufficient knowledge of forest management. So, training and instructions program should conduct in this field.
- Current government tax policy and other procedures seems obstacle for promotion of forest, so these activities must be freed to all FUG and c.
- Social and community forest cultural relation is highly attached with this forest of FUG, so policy for these activities must be forwarded right now.

- Bio-diversity is highly protected in this forest, so the scarce plants and animals must be recognized and policy for conservation should be forwarded.
- The trend of using the land of the forest as grave yard should be discouraged.
- Nursery for plantation is needed, so this strategy should be forwarded.
- There is little corruption to be solved.

During last 5/6 years, the forest is well protected. Socio-economic and environmental aspects of this forest are leading in balance way so other alternatives and more effective strategies must be taken for rise in resource both qualitatively and quantitative.

## REFERENCES

- Arnold, J.M. (2011). *Community Forestry: Ten Years in review*, Review edition, Rome.
- Bajracharya, D. (1983). Brief Sketch of Forestry Economics. *The Nepal Journal of Forestry*. Kathmandu: Nepal.
- Barkes, F. (1989). *Common Property Resources. Ecology and Community Based Sustainable Development*.
- Bartlett, A.G. (1992). A Review of Community Forestry Advances in Nepal. *Common Wealth Forestry Review* 71(2): 95-100.
- Bartlett, A.G. (2007). A Review of Community Forestry Advances in Nepal. *Community Wealth Forestry Review*, Vol. 71 (2).
- Bird, P. (2000). *Livelihood, Equity and Gender in Community Forestry: Gaining Perspective on Poverty: Proceeding of the Workshop on Community Based Forest Management*, Joint Technical Review.
- Chhetri, G. & S. Rana. (2007). *A Gender Analysis of Women's participation in Community Forestry*. Report submitted to Nepal Australia Community Forestry Project, Kathmandu.
- CIFOR (2001). Secondary Forests are Available in Asia. *In Centre for International Forestry Report 2001*.
- Dahal, D.R. (2012). *A Review of Forest User Groups: Case Studies from Eastern Nepal*. Kathmandu: ICIMOD. Kathmandu: Nepal.
- Dahal, M.R. (2008). Does Management of Community Forestry Really Benefit Nepal's Rural Poor? *The Economic Journal of Nepal*, Vol. 26. No. 2, April-June 2003 (Issue No. 102).
- DFRS, (2015). *State of Nepal's Forests. Forest Resource Assessment (FRA) Nepal*. Department of Forest Research and Survey (DFRS). Kathmandu, Nepal.
- Dukum & Lis. (2005). *Social Forestry: Theory and Practice*, FAO. Switzerland.
- Ebregt. A., Sah, R.N., Paudyal, D., Thapa, Y.B. and Siwakoti, R.S., (2012). *Collaborative Forest Management in Nepal (Challenges and Prospects)*. BISEPT-ST, Central Support Unit, Kathmandu, Nepal.
- Food and Agriculture Organization, (2010). *Global Forest Resources Assessment 2010 – main report*. FAO Forestry Paper No. 163. Rome.

- Food and Agriculture Organization, (2010). *Women in Community Forestry: A Field guide for the project design an implementation*. Geneva: Switzerland.
- Food and Agriculture Organization, (2016). *Forty Years of Community-Based Forestry: A review of its extent and effectiveness*. FAO Forestry Paper No. 176. Rome.
- Fisher, R.J. (2000). *Decentralization and Devolution in Forest Management: A Conceptual overview in Decentralization and Devolution of Forest Management in Asia and the pacific (eds)*. Thomas Enten, Patrick B. Drust and Michel Vector.
- Fisher, R.J. (2000). *Studying Indigenous Forest Management System in Nepal Towards a more Systemic Approach*. Working paper Environment and policy institute, East-West Center, Honolulu, USA.
- Gentle, P. (2003). *The flow and Distribution of Community Forestry Benefits: A case study from Pyuthan District, Nepal*. M.Sc. (Forestry) Thesis, School of Forestry, University of Canterbury, New Zealand.
- Gilmour, D.A & R.J. Fisher. (1996). *Villagers, Forests and Foresters: Philosophy, process and practice of community forestry in Nepal*, Kathmandu: Sahayogi Press.
- Gilmour, D.A. and Fisher, R.J. (1989). *The management of forest resources in Rural Development: A Case Study in Sindhupalchok and Kavreplanchok District*. Kathmandu: ICIMOD.
- Gilmour, D.A. and Fisher, R.J. (1991). *Villagers Forest and Foresters: The Philosophy, Process and Practice in CF in Nepal*. Kathmandu: Sahayogi Press.
- Government of Nepal (2004). *Government of Nepal, Ministry of Forest*. Kathmandu: Nepal.
- Government of Nepal (2016a). Unpublished data taken from *Forest Management Section on December 2106*. Department of Forest, Kathmandu, Nepal. website: [www.dof.gov.n](http://www.dof.gov.n)
- Government of Nepal (2016b). Unpublished data taken from *Forest Management Section on December 2106*. Department of Forest, Kathmandu, Nepal. website: [www.dof.gov.np](http://www.dof.gov.np)
- Gronow, J & N.K. Shrestha, (2005). *From Mistrust to Participation: The creation of a participatory*. Environment for CF in Nepal (Social forest network paper, 12b).

- Grosen, J. (2006). *Policy and Legal Framework Issue in Community Forestry in Nepal: Proceeding of the Workshop on Community Based Forest Resource Management, Joint Technical Review.*
- Haley, D. (2002). *Community Forest in British Columbia.* In *Forests, Trees and People* No. 46. Sweden.
- Hobley, M. (1996). *Participatory Forestry: The Process of Change in India and Nepal.* Rural Development Forestry Study Guide 3, ODI Publication, London.
- IUCN (2000). *Environmental Education (Source Book).* Kathmandu: IUCN.
- Kanel, K.P. (1993). *Community Forestry and the 1993 Forestry Legislation: Implication for Policy and Implementation.* Banko Jankari.
- Kayastha, B. P. (1991). *Elements of community Forestry in Nepal.* Kathmandu: Nepal.
- Khadka, M. (2006). *What Makes a Women Leader? Case Studies and Experience from Community Forestry Programs in Dolakha and Ramechhap district of Nepal: Kathmandu: Nepal.*
- Lindsay, J. (2000). *Creating Legal Space for Community Based Management: Principles and Dilemmas.* New York: USA.
- MFSC, (1995). *Forest Regulation 1995. Ministry of Forests and Soil Conservation, Government of Nepal.*
- MFSC, (2011). *Collaborative Forest Management Guideline 2011 (Nepali Version, 2068 B.S) Ministry of Forests and Soil Conservation, Government of Nepal.*
- MFSC, (2016). *Forestry Sector Strategy 2016-2025, 2016. Ministry of Forests and Soil Conservation, Government of Nepal. Kathmandu: Nepal.*
- Molnar, A. (1992). *Forest Conservation in Nepal: Encouraging Women's Participation in Reading in Natural Resource Management.* Kathmandu: Nepal.
- MOPE (2011). *State of the Environment.* Kathmandu: Ministry of Population and Environment, p. 42.
- Neupane, H.C. (2005). *People's Participation in CF Management. A Case Study of Maulukali CF User Group in Nawalparasi District.* Unpublished M.A Thesis Central Department of Sociology/ Anthropology, T.U, Kirtipur, Kathmandu, Nepal.

- Neupane; M. (1992). *The Forest Management Planning Process for Community Forestry*. NACOMMUNITY FORESTP Discussion Paper Kathmandu, Nepal. Australia Community Forestry Project.
- National Planning Commission (2002). *The Tenth Plan (2002-2007)*. Kathmandu: HMG/N National Planning Commission. Kathmandu: Nepal.
- National Planning Commission (2007). *The Three Year Interim Plan (2007-2010)*. Kathmandu: National Planning Commission, Government of Nepal.
- National Planning Commission (2010). *The Three Year Interim Plan (2010-2013)*. Kathmandu: National Planning Commission, Government of Nepal.
- Ohler (2000). *Final Report. Benefits of leasehold forestry on Livelihoods and Forest Management*. Technical Assistance Phase two to the Hills Leasehold Forestry and Forage Development Project (GCP/NEP/052/NET). FAO, Nepal.
- Ojha, H., H., Persha, L. & Chhatre, A. (2009). *Community Forestry in Nepal A Policy Innovation for Local Livelihoods (IFPRI Discussion Paper)*. International Food Policy Research Institute (IFPRI). (Retrieved from [www.ifpri.org/millionsfed](http://www.ifpri.org/millionsfed) on 27<sup>th</sup> Aug. 2012).
- Ojha, H.R., Timsina, N.P., Kumar C., Belcher, B., Banjade, M.R., (2007). Community-based Forest Management Programmes in Nepal: An Overview of Issues and Lessons. *Journal of Forest and Livelihood*. September, 2007, P.1-7.
- Oli, B.N., Dangi, R.B., Sharma, A.R., Pokhrel, D.C. and Karna, A., (2014). *CF in Nepal: Learning, Challenges and Destination (Nepali Version)*. Kathmandu, Nepal.
- Poudel, M., (2007). *Evaluating Collaborative Management of Forest from Rangapur COMMUNITY FORESTM, Rautahat*. Kathmandu, Nepal.
- Regmi, S.R. (2008). *Women in Forestry: Study of a Women's Forest Committee in Nepalese Village*: Winrock International.
- Roe, D., and Fred, N., (2009). *The Origins and Evolution of Community Based Natural Resource Management in Africa*. Community Management of Natural Resources in Africa: Benefits, Experiences and Future Directions. 2009: 2-12.
- Sarin, M. (2004). *The potential Role of Rural Women's Organization in Natural Resource Management*. In Local Organization in Community Forestry Extension in Asia, FAO.



- Shrestha, B. (2002). *Policy and Institutional Dimensions of Community Forestry in Nepal*. Discourse student Journal of Sociology/Anthropology, Department of Sociology/Anthropology, Patan Multiple Campus, Lalitpur.
- Shrestha, N.K. (2001). *The Backlash: Recent Policies Change Undermined User Control of CFs of Nepal*. Kathmanu: Nepal.
- Siddiqui, N., (1989). *Towards Effective Participation in: A Guide for Working with Women in Forestry*. Nepal Australia Forestry Project.
- Singh, H.B. (2002). *Farmer Field School in CF Management in Nepal*. An Approach to Group Learning and Experimentation by FUG. Nepal-Australia CF Project.
- Sponsel, E.L. (2000). *Tropical Deforestation. The Human Dimension*. New York: Columbia University Press.
- Timsina, N. (2002). *Empowerment or Marginalization a Debate in Community Forestry in Nepal*: Journal of Forest and Livelihood Vol. 2 (1). Forest Action.
- Winrock, (2002). *Emerging Issue in CF in Nepal*: KTM, Winrock International.



4.	Others					
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**1.4 Crop production pattern (in muri/kg)**

Crops	Paddy	Wheat	Maize	Potato	Mustard	Total

**1.5 Live stock composition**

Animal	Cow/Ox	Buffalo	Goat	Pig	Cock	Others
Number						

**1.6 How do you feed the animals?**

- a) Stall feeding
- b) Grazing on government land
- c) Stall feeding
- c) Others

**1.7. What are the forest products that you collect from community forest?**

Fuel wood	Timber	Medicinal Herbs	Leaf litter	Fodder	Others

**1.8 What is the source of energy?**

- a) Firewood
- b) Others

If firewood from where do you collect?

- iii. Private forest
- b) Government forest
- c) CF
- d) Others

**1.9 How many bhari of firewood you need a month?**

.....

...

**2. Sources of income of HH.**

**2.1 Income from agricultural crops and cash crops.**

S.N.	Name of crops	Annual Income
1.	Paddy	
2.	Maize	
3.	Wheat	
4.	Potato	
5.	Mustard	
6.	Tea	
7.	Cardamom	
8.	Ginger	
9.	Others	

**2.2 Income from community forestry.**

**a) Through wage**

Name of program	No of involvement		No of working days		Wage rate		Annual income

**b) Through salary**

S.N.	No of worker	Monthly salary Rs.	Annual income

### 3. Sources of income of management committee

#### 3.1 Income from community forest

S.N.	Types of forest products	Annual income (Rs)
1.	Fuel wood	
2.	Fodder	
3.	Timber	
4.	Leaf litter	
5.	Medicinal herbs	
6.	Others	

#### 3.2 Other sources of CF income

S.N.	Sources	Annual income (Rs)
1.	Entry fee	
2.	Fines and penalties	
3.	Membership fees	
4.	Donation from individual/organization	
5.	Visitor donation	
6.	Others	

### 4. Employment provided by community forest.

4.1 have you provided employment to people?

.....  
 .....

4.2 If yes, what types of employment have you provide?

S · N ·	Employment	Year	members involved (1,2,3,4) and frequency	Rate	Time spent day/hour
1.	Nursery work				
2.	Plantation/Weedding				
3.	Thin/purn/sing/cleaning				
4.	Harvesting and distribution and product				
5.	Protection work (Heralu/Others)				

6.	Collection/Processing of NTFPs				
7.	Participation in training workshop/observation tour				
8.	Other (specify)				

**5. Women participation**

**5.1 How many women are in executive committee of your community forest?**

- a) 1-3    b) 3-5    c) over 5

**5.2 What is the status of woman's presence in community forest?**

- a) Active    b) passive    c) Normal

**5.3 Do you feel that other people respect and consider your opinion?**

- a) Yes    b) no    c) no idea

**5.4 What type of role do you play in meeting of executive committee?**

- a) As a audition    b) discuss    c) provide suggestions

**5.5 How do participation in the CF development programme?**

- a) Providing volunteers    b) Providing land  
c) Providing financial support    d) others

**5.6 What types of social development works have you community forest?**

S.N.	Activities	Days
1.	Trial road construction improvement	
2.	Water supply	
3.	Temples	
4.	Others	

**5.7 What do suggest to Improve Woman's Participation in CF development Programme?**