

CHAPTER - I

INTRODUCTION

1.1 Background

Nepal is a small landlocked country where about 65.7 percent of people live in rural area depending mainly on agriculture. In rural Nepal, forest is an integral part of life. People depend on forests for supply of fodder, fuel wood, timber, herbs, medicines and other forest products which are day to day essentials. Forests of Nepal are often fragmented into small patches, particularly in hilly districts. To keep up sustainable supply of forest products and to conserve environment, suitable forestation programme with effective management pattern is necessary. Forest resources are essential for the well being of Nepalese people. The stock of Forest resources remain unchanged only if their use up rate is less than their regeneration rate. With these constraints the only realistic option for people is "forest managed by local people", that is community forestry.

HMG of Nepal has started certain programmes for the sustainable supply of forest products (fuel wood, fodder, timber, herbs, etc.) among which community forestry programme is the main and the popular one.

Community forestry is a forest protected, managed and utilized by local forest user groups. Community forestry is the section of national forest that is handed over to group of user households for control, proper management and sustainable use for the group's benefits. Considerable effort is now directed at forest user-groups involvement in forest management. Equally important to the forest resource, economic status and landscape stability is the encouragement of individuals, particularly farmers, in to forestry activities.

Community Forestry (CF) has been a priority programme area of the forestry sector in Nepal for over the last two decades. It is based on the concept of participatory development in which beneficiaries themselves define their objectives and implement activities according to their needs and priorities of development. Local communities have used rights of the resources and are

organized as grass-root level institutions for the proper management of these resources. Considerable success has been achieved in the development of community forestry in Nepal for which Nepal has earned recognition internationally. Nepal is recognized as a world leader country in the development of community forestry.

Community forestry is acknowledged as an innovative and progressive concept in forest management (Hobley, 1996). It aims to provide productive assets for the benefit of the poor by bringing about social changes and establishing efficient property institutions at the local level. In Nepal, community forestry can be thought of as an attempt to establish and or revive the community level institutions capable of managing and making efficient use of their forests. One of the major focuses now is to increase people's livelihoods through management of forest resources. The responsibility for the sustainable management and use of forest resources has been transferred to the local community by forming Community Forest User Groups (CFUGs), although the state retains ownership rights over these forests which is the special feature of CF programme. Therefore, a CFUG is defined as a group of local people given rights by the government to manage and use forest resources. Forest Act 1993 defines CFUG as a group of users for a particular forest which has registered under section 42 of the Forestry Act 1993, for the management and use of a community forest.

The concept and practice of community forestry in Nepal was developed during the period of early to mid 1970s. The national forestry plan 1976 recognized and accepted the community forestry policy for Nepal, and the legislation to promote CF was brought in 1978. Lining with this policy, master Plan for the forestry sector (MPFS, 1988) has also identified community forestry as one of the primary programme of the forestry sector. About 47 percent of the total budget of the forestry sector has been allocated for this programme (MPFS, 1988). After the endorsement of the MPFS, 1988, the government has made a lot of efforts made in CF development. Despite the high priority and continues external support, CF was not popular in the rural communities of Nepal before 1990. This was because CF activities concentrated on tree plantation and CFUGs were given barren areas or

degraded forests with plantations. Furthermore, there was no clear judicial arrangement of by-laws empowering CFUGs before 1990 resulting in fewer initiatives from the CFUGs towards the development of CF.

Community forestry development has been an evolving process including the periodic legislative arrangements made for its development MPFS (1988) still remains the guiding document for the forestry sector including CF, moreover, legal provision made by the Forest Act, 1993 and Regulation 1995 enhanced community participation in the sustainable development of CF in Nepal. The legislation clearly established CFUGs as the responsible organization for managing forest resources. Furthermore, it gave legal rights to CFUGs to use forest products from their forest in return for protection and management of the forest. The by-laws delegate authority to the CFUG to develop capital through the collection and utilization of the fund generated from the sale of forest products. CFUGs can use this capital at their own discretion after meeting the needs of forest management.

Nepal's CF programme has proved to be a very encouraging endeavor in the development of a partnership in forestry between farmers and the government (Mahat, 1998). Forestry legislation and accompanying by-laws are in place and are being refined, large areas are being brought under local community management. The CF programme in Nepal began with the concept of fulfilling basic forest products' needs of the local community and for conserving the forest eco-system. In the recent years, however, it is shown that there is a gradual shift of CFUGs from subsistence towards magnetized market economy. CFUGs are getting increasingly involved in Income Generation Activities (IGAs) such as, cultivation of non-timber forest products (NTFPs), agro-forestry development, each crops raising etc. Different projects, such as CFUGs and Districts Forest Officers (DFOs) have worked side-by-side to improve poor-focused in IGAs. Income generation from the sale of forest products is becoming popular in CF and it is perceived as major incentive for forest conservation and a source for rural development. The development of CFUGs resources is taking the work beyond forestry, into boarder community and human resource development roles (Pokharel, 1999). The funds generated can be used in various activities, for payment of watcher's salary, donation for

local drinking water projects, assistance for primary school, overheads of groups and for other types of community development activities.

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

1.1.1 Recent Status of Community Forests

Several forest areas have been handed over to groups of local people entrusted to manage, use and protect under the provision of the Forest Act 1993. The goal of development an instrument to help realize the broader goal of sustainable development through poverty alleviation.

The status of the community forests according to CFUG database record available in MIS, Nepal, is presented.

Name of Projects	No. of Districts	No. of FUG	Handed Over CF Area (Hactare)	No. of Households
BISEP-ST	7	181	22629	43412
CHFDP	2	183	22303	29437
LFP	15	3559	282096	3999091
NACRMLP	2	818	41539	82110
NSCFP	3	804	74863	107851
SAGUN	3	204	16536	34409
Tarai	4	90	14368	35674
Grand Total	74	13791	1139233	1575512

Source: Community Forestry Division, Department of Forest, Kathmandu, May, 2009.

According to the above table, mainly seven projects are engaged in development of the community forest. NARMSAP has been engaging the various area of CF districts. Under the CF program, 1139233 hectares of forest land have been already handed over to the community, 13791 CFUGs are organized and 1575512 households are involving in CFUG.

In about 25 years or so, more than 13,000 forest user groups have been formed who are managing more than one million hectare of government forests as community forests. Many CFs in Terai have great potential of commercial timber production due to the endowment of high value timber species, their fast growth, high population pressure and timber market. Therefore, they are used for both subsistence and commercial use. Whereas, CF in the middle hills are mainly used for subsistence needs. However, increasing road networks in the hills have some implication on the commercialization of CFs in those areas (CFD, 2004).

The CFUGs of Terai (7% of the total number of CFUGs) alone have contributed 27 percent of the total income of CFUG, while CFUGs in the middle hills and high mountains together have contributed 73 percent (Kandel, KR & BR, 2004).

Community Forest User Group (CFUGs) are autonomous institutions, empowered under the Forest Act 1993 to manage and utilize their community forests under the guidance of an operational plan which they develop by themselves. Women represent about 24 percent of the total member in the executive committee. Out of the total number of 13,125 CFUGs, about 5 percentage CFUGs having only women as members. Women only CFUGs are well managed as compared the men CFUGs or mixed CFUGs. The number of households in a CFUG varies from 5 to 4750, an average being 112 households per groups. Studies have shown that CFUGs of smaller size are more successful than the larger ones. About 35 percent of the total population of the country is benefited from the community forest. The process of the CFUG formation was very slow in the beginning (Kandel, 2004).

The CFUGs are not only provided with well stocked forest but also with degraded forests. Out of the total area of CF handed over to CFUGs, 74

percent were in good condition, 18 percent were degraded and remaining 8 percent are not specified during the hand over process. Community forests have been grouped into four categories based on the type of vegetation dominating CF. Out of the total CF area, 83 percent is natural forest, 14 percent is shrub land, 3 percent is plantation and 0.2 percent is grassland. Sal forest dominates the community forest followed by pine forest, subtropical deciduous forest and schimacasonopsis forest. Sal forest is of high value and good market potential (Kandel, 2004).

Main challenge in CF lies in integrating CF policy and practice with democratic governance and livelihood imperatives. Good governance for the CF development that promotes supports and sustains human development especially for the poorest and most marginal.

Sharing of revenue from community forests for the purpose of program implementation has been legalized through a finance ordinance. Operational plans are almost silent about the linkages and coordination mechanism among different CFUGs. None has identified the potentiality of sharing experiences, supports and benefits that can be derived from the effective implementation of the operational plan.

Generally, elites in the study are exercising their power, as they are aware of legislation, have access to information and are capable to use them for their benefits. Many user group members are hardly aware of their own community forest constitution and operational plans and lack understanding for their rights and responsibilities towards effective functioning of their forest user group. Lack of adequate knowledge and technical skill among users might be the reason for the formulation and implementation of poor operational plan and constitutions. Involving people in the process of CF is the key step in raising awareness on community forestry.

Although the forestry sector policy has tried to defined accessibility of users to forests and forests products linked with collectively recognized traditional user right, distant and seasonal users have been excluded. Poor, women and disadvantaged group are adequately represented in the executive committee. Furthermore, the majority of women, landless, poor and

disadvantaged groups remain silent observers and listeners of community forestry processes. The decision makers in community forestry make decision based on their own interests and ignore the priorities and concern of the poor. Poor and occupational caste people are more dependent upon forest resources for their livelihood. They have developed local resources management knowledge and skills. They are adepts at finding suitable resource management systems, and in maximizing their use. But, they are often not consulted in the management of community forest. In many cases, participatory process has not been followed in the operational plan preparation. Ordinary users of the CFUG are unaware of the contents of the operational plan. As a result, most of the users see community forest as the forest of the executive committee (Kandel, 2004).

Once excluded from the CFUGs, one has to pay very high fees to get back their traditional access and use rights. An issue here is ensuring use right of genuine users and promoting equity within the members of the CFUGs. Community forest management issues are only discussed in committee meetings and in general assembly, where poor people and women usually do not participate. The normal practice in community forest is that the elite members of the society tend to take all key position in the executive committee and make decisions on community forest management such as harvest of the forest products and their distribution.

The ordinary users of the CFUG are least involved in the overall process and have virtually no idea whatsoever related to harvest of their community forest. Thus, it may ignore the traditional dependence of the poor, women and occupational castes. In CF stakeholders should have access to enough information to understand CFUG dynamics, to monitor them and for CFUGs to monitor themselves. Accountability and ownership are the important variables contributing to positive impacts of community forestry.

Executive committee members should always be accountable to the users of the CFUG. But it has not happened in practice in most of the CFUGs. The assembly of a CFUG makes all kinds of decisions related to community forestry. Assemblies prepare constitution and operational plan, define and recognize use rights, decide all kinds of rules, and make management decision

including protection, harvesting benefit sharing, and mobilization of CFUG funds for community development. The assembly elects an executive committee for the implementation of CFUGs' decisions and to carry out day to day work. However, it may not happen in the real sense. The executive committee makes most of the decisions on behalf of users and committee members are not accountable for those decisions. The development of an appropriate mechanism is required to avoid, dominance of committee members in decision making and them accountable for their decisions.

The benefit distribution mechanism for forest products is not well defined in the operational plans of many CFUGs. Most of the operational plans have noted the price of timber and fuel wood that user have to pay, but remain silent on non-timber products. Even if it is mentioned in the plan, non-timber forest products would be distributed according to the decision of the executive committee. As the representation of the poor and disadvantaged groups in the executive committee is meager, the sharing mechanism could hardly fulfill the demands of forest products for the poor and disadvantaged groups. If the products are sold to members, the poor do not have the ability to pay. Poor and disadvantaged groups suffer the most in this type of sharing mechanisms.

Many management prescriptions are conservative in terms of the harvesting levels allows for forest products. Gradually the protection scheme improved the quality fo the forests and increased the richness of species and overall bio-diversity. However, local people are not able to use the full potential of these forests. The CF program many not result in more benefits to the poor, if it is poorly executed. May landless and occupational caste people are compelled to use fuel wood from the adjoining national forests due to the closure of community forest in the name of protection.

This gap between passive and active forest management is intensifying due to the lack of operational guidelines on optimum harvest. Due to the limited technical and manpower capacity, CFUGs have not been able to implement the operational plans and carry out forest harvesting and utilization. Many indigenous species are displayed by the new others. Sustainable management of forest of Nepal can be assured only when community forestry

management activities meet the criteria and indicators for the sustainable management of forests.

The Forest Act (HMG/N, 1993) and rules (HMG/N, 1995) allow the CFUGs to sell and distribute forest products independently. Several CFUGs have been selling their valuable species to contractors at a lower price than prevailing market rate. Furthermore, lack of transparency in account keeping system allows the limited members of elites to capture rent format the system.

The fund management issues clearly indicates that long term sustainability of CFUGs is questionable, irrespective of the fact that the protection regime of community forests at the moment is reasonably effective for maintaining the greenery.

The bureaucratic process involved in securing transportation permits/colelction permits for Jaributi (Medical plant) species and their trade are cumber some. Furthermore, as Kanel (1999), point out, the multiple checkpoints that are established for verification while transporting forest products including NTFPs had led to a high transaction cost. Changes in the permit regime are needed. Procedures for obtaining permits and licenses need to be clear and transparent (Kandel, KR & BR, 2004).

1.2 Statement of the Problem

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 CF 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 dorm 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? As the Households are heterogeneous in income levels, the marginal utility of income of the gain or

loss can make poor yet poorer. Low or passive participation of poor, disadvantaged group, women and *Dalit* in CF is dominated by local elites. 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 CF 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, 2003).

The present state, with its heavy dependence on foreign aid and its lack of other resource has not been able to reap as much benefits from the forest resources, as could be the case. In 1998 a cabinet level directive decreed that 40 percent of the sales revenue from all the CF users in the Terai should go the government (Gyawali & Koponen, 2004).

Planning should take a longer perspective but short term planning horizons focusing primarily on the forest rather than the whole ecosystem and general community development. Technical forest management can be more effective if preceded by a meaningful process of group motivation (LIBIRD, 2003).

Elites capture of a greater proportion of benefits. This challenge is to redress the balance without antagonizing sections of the community. Majority of women and other marginalized group do not feel effective members of CFUGs (LFP, 2003).

A same successful CFD model is used in different types of places, so some of the CFUGs are failed to manage their CF. Alternative forest products, or alternative sources can reduce the demand for FPs from CFs (LFP, 2003). CF 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 (Mahat, 1998). The CF program in Nepal began with the concept of fulfillment basic forest products' needs of the local community and for conserving the forest ecosystem. CFUGs are getting increasingly involved in income generation activities (IGAs), such as, cultivation of non-timber forest

products, agro-forestry, cash crops. Although many agencies, NGOs, INGOs are involved to develop and manage the CF, not notable result is found out.

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

1.3 Significance

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. The CFUGs are not only provided with well stocked forest but also with degraded forests. Out of the total CFUGs, 74 percent are in good condition and 18 percent are degraded. Rapid improvement in the condition of the community forests should be observed after handing over the forests to local communities (Kandel, 2004).

For the last 25 years, forest has been over utilized and destroyed at large. 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.

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of the study is to analyze the economic effect of community forest to the Kankali community forestry users.

1.4.2 Specific Objectives

- (i) To examine the community development activities undertaken by Kankali Community Forest User Groups.
- (ii) To analyze the benefits derived by the Kankali Community Forestry User Groups.
- (iii) To find out the problems regarding the community forestry in the study area.

1.5 Limitation of the Study

Every research work has its limitations. Limitation of this research is as follows:

- (i) The study has covered only Kankali Community Forestry User's area of Chainpur VDC, Ward No. 8 of Chitwan district.
- (ii) This study has examined the economic effect of community forest.
- (iii) Some of the generalizations derived from the observation of this area may not be applicable to other area which are likely to differ in certain respects.
- (iv) The data analysis is based on simple statistical techniques. The sophisticated statistical tools are not adopted for the generalization of this study.

1.6 Organization of the Study

This thesis has been organized into seven chapters. Each chapter developed to some aspects of the study on economic effect of Kankali Community Forest. The chapter one to seven consists of introduction, literature review, research methodology description of study area, CF activities, benefit derived by CF and its problems and major findings.

The first chapter of the thesis outlines the introduction of the study. It covers background, statement of the problem, significance of the study, objective of the study, limitation of the study and organization of the study.

The second chapter presents the literature review. It covers the conceptual and related literature review.

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

The fourth chapter deals with the description of study area. It concludes Chitwan district, Kankali CFUG and general information of CFUG.

The fifth chapter deals with community forestry development activities. It includes CDAs, income generating activities, income and expenditure.

Chapter six presents benefits and problems of community forestry development. It covers benefits of users, forest product collection and distribution, availability of forest products and problem of CF development.

Chapter seven deals with major findings. It includes summary, conclusion and recommendation.

CHAPTER - II

LITERATURE REVIEW

2.1 Conceptual Literature Review

Shrestha (2004) defined the community forestry as "the control, protection and management of local forest by local community known as user group." She stressed that the main objective of the community forestry is to achieve sustainable forest resources by converting accessible national forest into community forest in different stages.

According to the guidelines for community forestry development program (2058 BS), there are 5 stages mentioned the following:

-) Identification phase
-) Forest user group formation phase
-) Operational plan preparation phase
-) Implementation phase and
-) Review and revision phase.

By the twenty five years practical experienced of community forestry, Giri, Kalpana (2005) declared that community forestry in Nepal denotes 'user group forestry' as one such co-adapted system of participatory management, renaming the age old local institution under proper regulatory organization of Community Forest User Group (CFUG). The forest users are trusted legal right for overall management, utilization and protection of the resources with the assistance of the forest department.

Anonymous (1991) stated on his book of community forestry in Nepal that, in 1979 community forestry was adopted as a strategy that "Initially emphasized people's participation in reforestation of degraded lands." The strategy enabled government forests to be handed over to the village Panchayat for their protection and management with the enactment of progressive legislation (Panchayat Forest Rules, 1978). The programme was to

return the management rights of forest resources to the people. Such program however, failed since the status of "custodial element" remained unabated.

According to Kandel (2002) by the late 1980s, community forestry had been launched to include participatory forest management and rural development. This led to the formulation of broad guidelines in the form of master plan for forestry sectors 1988. The plan included the objectives well as restoration of natural balance, economic mobilization, scientific management and promotion of public cooperation. It designated community and private forestry programme as the priority programme of forestry sector in Nepal. The plan provides a 25 years policy and planning framework for the forestry sector of Nepal. Consequently, community forestry become 'people centered forestry' (2002) in Nepal that enhanced a feeling of 'we and our forest.'

According to the Forest Act and the Forest Rules, gave FUGs legal rights to forest products from their forest (but not rights to sell the land, build houses or cultivate the area) "in return for assuming responsibility for protection of the forests" (Acharya, 2002). It made provision for improved resource management through community involvement, via forest handover formation and institutional support to local communities. The FUGs have proven to be a viable approach for the regeneration and protection of the forest and providing forest products for the needs of the local people. The FUGs are obliged to adhere the forest management plan (operational plan) approved by the district forest officer. Forests managed by a FUG can be quite small (0.25 ha.), regardless of size an operational plan is needed. The operational plan outlines harvesting and silvi-cultural schedule. The FUGs are allowed to sell the excess amount of forest products, raise funds and use the income generated from the forest for community development and forest regeneration activities (Gilmour & Fisher, 1991).

Paudyal (2003) reported that the community forestry is based upon the concept of people's participation. It recognizes the industrial role of forestry but it equally emphasizes the importance of forests and related products for the local people. This policy is based upon the assumptions that the local people should have access to the forests and their products. As rural people spend several hours a day collecting forest products, they do not know the

importance of trees and also forest management. Involving people will result in forests being managed and protected in a better way. The community forestry policy combines the environmental objectives of preventing land degradation and deforestation with social and economic objectives. It tries to address the basic needs of the people in trying to meet their needs of fire, fuel and fodder. After the introduction of the community forestry, Nepal has gained the reputation of being the promised land of community forestry, which is argued to have significantly slowed down the rate of deforestation in the hills.

Master Plan for forest sector defined its objective as, "conserving forests and meeting the basic needs for forest products of the users in the hilly areas." the plan envisaged handing over of forests to the traditional users to fulfill forest related basic needs in the hilly areas of Nepal. Nepalese people, under subsistence economy, depend on forest resources for fulfilling the subsistence needs such as fuel wood, fodder and timber. The objective of community forestry has gradually evolved from producing forest products to a process of social mobilization for community development (Giri, 2005).

According to Tenth Five Year Plan (2002-2006), the ninth and tenth five year plans opened avenues for community forestry to play a dynamic role in broader economic growth and substantial contribution to poverty reduction. His Majesty's Government has reiterated its commitment towards poverty reduction. This commitment was also reinforced in the Interim Poverty Reduction Strategy Papers (I-PRSP), which was a transition to the tenth five year plan. There is a common point between the plans. Economic development is encouraged along with other forms of development. The obvious reason being the ability of the government on social spending largely economic growth. The present policies of Nepali state, with its emphasis on community forestry, has been moving towards 'populism' by seeking to enhance peoples participation in this sector. Sections of the bureaucracy, however, still try to reassert its control.

Paudyal (2003) stated that in 1998 a cabinet level directive decreed that 40 percent of the sales revenue from all the community forest users in the Terai should go to the government. The government again extended the 40 percent requirement to all community forests through the Royal Ordinance in

the budget of 2003. There was much protest to this ordinance at different levels. The forest users, environmentalists, donors and ordinary citizens protested this. After an emergency meeting with 15 Nepal based donor groups, the government withdraw its decision.

Gyawali and Kopohen (2004) reported that the present state, with its heavy dependence on foreign aids and its lacks of other resources, as could be the case. This makes it all the more necessary at this juncture to bring in forestry policies that can address this concern and complement the livelihood in forests of the people with the state's interest to generate resources.

ITRC (2001) described that community forest stands as one of the most successful participatory development initiative in Nepal with the intertwined goal of conservation and livelihood support. At the central policy level, the strategy of community forestry can be considered as both radical and progressive. It is characterized by increasing emphasis on democratization of forest resources and the participation of local communities in forest resources management. National development plan requires it to explicitly contribute to poverty reduction. This 'paradigm shift' from basic needs fulfillment as a way of sustenance to sustainable management demands redefinition of management processes and policies in the coming days. One such definition could be: "in community forestry, the government transfers communities the responsibility of managing government forests and the rights of using the forest products in a sustainable way and with the ultimate policy objective of improving livelihoods of rural communities". Community forestry advocates strong community participation, bottom up planning and sustainable use of forest resources and local user groups/communities are responsible for the control, protection and management of the forests. Community Forests are important renewable natural resource. They contribute substantially to the economic development of a country by providing a variety of goods and services to the people, industries and ecology.

Ojha (2004) described that the fundamental services that the forest resources offer to mankind broadly categorized as three major functions:

Protective functions

Protection of soil from runoff/erosion by wind and water, and from excessive solar radiation exposure.

Conservation of soil moisture and water holding capacity of the soil. Protection of beneficial microbes and insects in the soil, thus facilitating the maintenance of better structure, texture and productivity of the soil.

Regulatory functions

Absorption, storage and release of carbon dioxide and oxygen gases and micro and macro mineral elements. Absorption of aerosols and noise. Storage and release of ground water. Absorption and transformation of radiant and thermal energy.

Production functions

Storage of energy in the form of floral and faunal biomass. Production and regeneration of products such as leaves, wood, fruits, buds, flowers, bark and roots. Production of large variety of chemical compounds such as alkaloids, essential oils, latex, dyes and pharmaceuticals.

Ojha (2004) clarified that the numerous beneficial services (direct and indirect economic importance) of forest resources delineated perhaps more elaborately and clearly such as- Ecological effects, indigenous consumption, industrial uses.

Lekhak HD & B (2003) reported that the forests have wide range of values. Forests play a key role in ecological balance in the environment and economic development. Forests are also linked with our culture and civilizations i.e. they have religious values. Pristine forests act as a major attraction for tourists. Rural people are very dependent on many non timber forest products for their subsistence needs. Forests are the habitats of wildlife. They play an important role in enhancing the quality of environment by influencing the life supporting system. Life supporting system refers to atmosphere, hydrosphere, lithosphere and biosphere. Forests contribute in protection of wildlife, help in balancing the gaseous (CO₂, O₂) cycles of atmosphere, tend to increase local precipitation and water holding capacity of

soil, maintain the soil fertility, regulate the earth's temperature regimes and the hydrological cycle, control of soil erosion, landslides, siltation of watershed and reduce the flood havoc. Forests also have the aesthetic value and act as a natural laboratory for study and research. Besides this forests are important renewable natural resources.

Kanel and Niraula (2004) reported that the findings of 12 districts covering the hill and Terai, a variety of forests products are collected, used or soled by CFUGs and generate fund, which is spent mainly on forest and community development activities, the annual expenditures of community forest development program are: pro-poor program cost-3%, community development activities cost-36%, CFUG operational expenditure-14%, training, study, tour cost-2%, forest development cost-28%, miscellaneous cost-17%.

According to Kandel and Subedi, (2004), identifying the target groups, social mobilization, targeting the poor, micro enterprise development activities, self development skills development training, income generating activities, small infrastructure activities, saving and credit activities are the main activities of community development. Mobilization of the fund in commnity development is second major activity after forest development with 17% of spending. It is directly linked to the welfare of the community. Community forest is a partnership program between government and community organization in which government staff play a role as facilitator and catalyst to identify real user groups to prepare operational plan of forest and constitutional of group and in implementation of CF activities where as community forestry user group is responsible to manage, protect and utilize the forest on the sustainable basis. CFUG fund is utilized in a variety of development works according to the need and priority of the local community. Mainly the CFUGs expenditure is on community building, drinking water, road, trails, temples, bridge, electricity's poles, and forestry operation.

Paudel and Thapa (2004) reported that some households of CFUG of Chitwal district are provided goats buffaloes and cows and loan for keeping them to generate income, and some of the CFUGs of same district, are

involved in bee keeping, mushroom cultivation and NTFP cultivation activities.

According to the Baral (1998), there two problems are existed in the community forestry planning process. The first one is district level problem which is related to low salaries, low intensive, low support, no job guarantee, no proper evaluation, no clear posting and transfer policy of forestry personnel. Some of few forestry personnel know little knowledge about community forestry. The proper technical and administrative support can't reach in CF user area on time. Another one is user group level problem, in which includes investigation of the forest area clearly without any oppose, to make a conclusion among the users' negotiation is difficult task. The participation of the real users in general assemblies is always poor. Very few women and *Dalit* participate in discussion. The poor people often don't have time to collect fuel wood for themselves as, to earn money, they are collecting for others. Although the participation of women, *Dalit* and poor people in decision making is poor, in the implementation phase, their participation is always high. The executive committee in the nomination or the election of this committee is also not free from problems. The percentage of dominant user is always high in comparison to others.

Lekhak HD, B (2003) reported the problems of forest on their book of national resources conservation that, heavy pressure on forest is being exerted by increasing human population. The people depend on the forest for firewood, timber, fodder for livestock and other non-timber forest products as well as for cattle grazing. As a result of this pressure, forest are decreasing by area and losing their productivity. These issues and problems are obstacles to develop CF, according to them.

Population growth, migration and poverty, total dependence on forest resources, defecting, conflicting and inconsistent policies and laws, non implementation of plans and programmes, lack of people's participation and human resource development and lack of research and development. Lack of monitoring and evaluation, Hunt (1999) represented that:

Some of the CF related problems are- Harvesting system is not well developed, large gap between demand and supply, almost all operational plans are protection oriented, lack of representative, comprehensive and common understanding level and lack of capacity building activities.

Thakur, Narayan (2000) stated that five conflicts problems within CF are: Cultural conflicts problems, gender conflicts problems, economic and environmental conflict, policy conflicts problems and land conflicts problems.

By the three districts experienced of NSCFP (2005), there are two major problems. First is external related to FUGs' autonomy, and second is internal related to poverty.

The external challenge is about the intensions and actions of big political actors such as government, particularly ministry of finance and forests, Maoist insurgents and "local government" towards FUGs' financial autonomy and relationship with these "big" actors. Although here are policies, legislative framework and verbal assurances which very much support community based resource management regime, perception and decision made with regard to benefit sharing arrangements and taxation remain ambiguous threatening the autonomy of CFUGs' decision making rights. The internal challenges is about the equity, sensitivity and poverty orientation of local power elites, who are the CFUG leaders. Equity provision for the benefit of the poor mentioned is the case study. The most significant is the local champions and charismatic young leaders who are exceptional in their thinking different from fatalistic thinking that Nepali society has suffered for long. Finding good leaders in villages is a real challenge.

Shahi (2000) stated that many rural people meet their subsistence needs from the collection of the fuel wood, fodder and other non-wood forest products. Forests have been the source for livelihood of rural people. Without forest resources, they have to migrate the urban areas leading to family and community disintegration. Hence CF has been an effective tool for poverty reduction and income distribution.

Pokharel (1999) reported that the incidence of financial capital formation through income from community forestry is widely reported in

literature. Community forestry has been a source of income and employment opportunities for rural communities. Recent experiences in Nepal suggests that community forests can yield more than subsistence needs and that forest user group can generate income from a variety of sources. Income generation from community forest can and does play an important role in providing local employment and developing local markets.

According to the Pokharel (2001), the handing over of the forest too communities for management and use has increased the opportunities for organized income generation. CFUGs have started to in-corporate income generation activities (IGAs) in their operational plans. There are many examples such as inter cropping of each crops, cultivation of non-timber forests products and medicinal herbs. Selling red clay, seedling, firewood, poles and timbers organized tours for tourists in community forest, membership fees and penalty are other sources of income from community forest.

Subedi (1999) reported that non-timber forest products play an important role in the livelihood of people. The economic value of non-timber forest products in the South East Asia are highly significant to the rural and national economies of the region in terms of the provision of materials needs cash income and employment. Currently there are few documented cases of CFUGs generating income from NTFPs. Several examples from CFUGs can be cited where they are involved in collection, processing and sale of NTFPs for income generation and to meet subsistence needs in order to alleviate poverty. Forest-based enterprises are not common with community forests in Nepal. Very few FUGs have started small CF based enterprises. Rope making and plate making from *Sal* (*Shorea robusta*) lease are some examples. Forest-based small-scale enterprises can play a key role in household economics because these are often seasonal and household based. They provide the much needed supplement income when alternative means of income generation and unviable or spare time is available outside of household activities. A recent survey found that about 100 entrepreneurs handled approximately 42 thousand tones consisting of more than 100 different NTFP items in 1995.

The current Forest Act (1993) has made the provision that any part of the national forest could be handed over to a defined and organized forest user group with full authority for the management of the forest property, CFUG as an autonomous and self-governing entity, can generate funds from different sources and can use it for community development besides forestry development. There are tremendous opportunities to integrate community into community development. This is because the subsistence livelihood of the rural people is primarily based on agriculture and livestock husbandry, which in turn is intricately linked with forestry. It is well understood that without forest the life in rural areas is impossible (Baral, 2003).

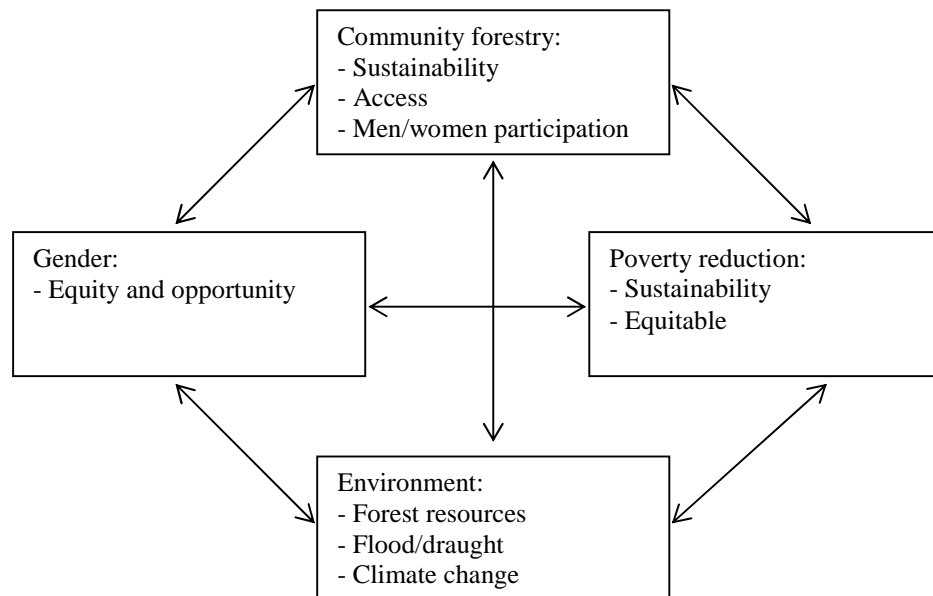
Singh (1998) reported that many CFUGs, after meeting their forestry needs of fuel wood, fodder and timber have earned a significant amount of income for their group funds from the management of community forest and another viable sources. Although book-keeping and financial auditing of CFUGs are at a rudimentary stage, collection of substantial amount of fund by many CFUGs signifies that CF is gradually moving towards the magnetized sector of the economy. These funds are now being used for many CDAs and FDAs. Many CFUGs in the Nepal Australia community forestry project 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 for use in literacy programs.

Hung (1996) described that community forest management is helping community development activities by injecting funds and voluntary services. For instance, in Nepal and India, CFUGs are undertaking small-scale CDAs with the funds generated from community forests. These small-scale development activities could be more appropriate than externally 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 continued sustained income from CF would provide for on going maintenance costs. This is particularly important when outside funded rural development programmes fail to provide. Continuous benefits after the termination of

external funding as local communities often do not have sufficient funds to maintain the infrastructure.

Dangol (2000) stated that providing funds for rural development is not the only way that CF supporting neural development. It has also mobilized a growing rural labour force by providing off-farm employment such as harvesting of timber and non-timber forest products, processing and transportation of forest products. These opportunities are extremely important in the third world countries where capital flow from central to rural areas in extremely low. Therefore, this could provide the local with valuable opportunities to become self reliant through sustainable management of local resource.

Shrestha (2004) confined the poverty reduction through the sustainable use of community forest. She presented the relationship between community forestry, environment, socio-economic development and poverty alleviation in the following figure.



Relationship between community forestry, environment, socio-economic development and poverty reduction.

Sharma and Subedi (2003) stated that small infrastructure development activities for the poor such as drinking water, rainwater, harvesting, latrines, trail construction, school building repair have been successful although on a small scale. An evaluation study has identified this small scale low cost and

low input approach as a lacuna in the field of pro poor infrastructure development often overlooked by larger, more conventional programmes.

According to the Nurse and Paudel (2003), saving and credit schemes are practiced in many CFUGs. In some CFUGs, separate saving and credit sub-committees have been formed involving the poor households of the group. Each member deposit a monthly fixed amount as sub group saving. The money thus collected will be mobilized within the sub group on rotation basis at low interest rate.

Ojha and Subedi (2004) described the topic of fund allocation for emergency, used for poor members of community for emergency medical use. In Baglung district a small health initiative on lie saving health massages on safer motherhood through the CFUG structure has increased women participation in community forestry. In some groups, provision has been made to provide CFUG fund to the poor in case of natural disasters and death of the family members.

2. Related Literature Review

The study on the achievement of Nepal Swiss Community Forestry Project (NSCFP) carried out in 2004 by the program coordinator Pokharel (2004) in the three districts of middle hills, namely Dolakha, Ramechhap and Okhaldhunga. This study emphasized the forest condition, governance and people's livelihoods. Study showed that 33% areas have been handed over to the local communities. Up until June 2004, a total of 93,113 households members have been organized into 812 CFUGs. Communities are increasing interested to takeover community forest. Representation of women *Dalit* and ethnic group in CFUG committee is increasing. It is increased from 21 percent in 1995 to 35 percent in 2004 in the project area. There has been significant increasing of trained human resource at the village emergence of FUGs as CBO service provider is another achievement in the project districts.

In 8 years time, more than 70 NGOs have been involved in community forestry in three districts. It is important to note that of the total employment generation through NGOs, more than 85 percent employee are from the

project districts. Number of women for both social mobilization part and technical part is significant.

The scholarship for *Dalit* and poor children has been conducting in 66 project area and only two project area provide the opportunities for disable and *Dalit* as social workers. 19 forest project area allocated the land to the poor.

Out of three districts only Ramechhap district has conducted skill development training to the poor.

According to the study of Pokharel, all of the CFUG's activities are based on institutionalization of democratic practice, FUGs working as village bank and financial institutions, marketing and supply of forest products, judiciary, cooperatives and collectives, security and internal affairs, environmental management agriculture and livestock development, drinking water and community infrastructure, gender empowerment and social equity, education transport, communication and information, tourism, health services and forestry development. Although so many benefits providing to the users, Pokharel found two types of challenges in these projects. First one is external related to FUGs autonomy, is about the intentions and actions of big political actors such as government, particularly ministry of finance and forest, Maoist in surgent and local government towards FUGs financial autonomy and relationship with these big actors.

Pokharel reported about internal challenge is equity sensitivity and poverty orientation of local power elites who are the CFUG leaders.

A case study of Syangja district carried out in 2002 by Lamichhane (2004). It focused on the role of women in community forestry in decision making process. The methodology was descriptive in nature and had followed sociological research methods.

In this study, it is found that the FUG related activities are more responsible for increasing women's participation in CF activities rather than socio-cultural aspect except economic ones. The FUGs which have been organizing extension and awareness programmes for its member have proved active women participation. Women's role has been considered to be vital in wise use of resources but existing role is latent. There are four CFUGs in

Syngja district. Hesitation due to caste and gender in participation is being faded away and there is an increasing trends of female's involvement in public sphere. However, the level of women's participation is low in Brahmin homogenous society where socio-cultural norms and values are strongly practiced in such consanguineous communities. There is no need of further adult literacy programs for women because they have already received opportunities to such programmes, which has made them able to put signature. More active age group of women in CF is 29 to 45 years and that of male is 30 to 80 years. Illiterate but experienced women have actively participation in discussion rather than literate. The average family size of a household in the FUGs is 6. Users of low income status are found less involved in CF activities. The women's communities are made up in the compassion or mercy of males.

Paudel and Thapa (2004) have conducted a study in Dolakha district about the community forestry for poverty reduction. The aim of this study was to find out the CF contribution for poverty reduction.

Paudel and Thapa reported that CFUGs have raised the fund from different sources in different economies of scale for forestry and community development. The size scale of fund ranges is from Rs. 500 to Rs. 20,000. People are provided the loan for different income generating activities like goats, buffaloes and farming vegetables and crops. Many users are benefited by mushroom cultivation, NTFP cultivation and bee keeping. Sukram CF has allocated 77 ha. Its area to the identified 19 poor households for management, protection and utilization. Sole benefit from the extraction of the NTFP from the allocated area goes to the poor household. Poor are not benefited equally therefore they got loan with low interest or no interest. 97 poor girl children are provided for pre SLC scholarship by NSCFP. Although more advantages provided to the poor people, the dominant role of local elites are most challenging task.

Kandel (2004) carried out the study in some Terai and inner Terai region which focused on the income generating activities of CFUGs. It is found that the CFUGs of Terai alone have contributed twenty seven percent of the total income of CFUG, while CFUGs in middle hills and high mountains together have contributed seventy three percent. The study of Terai and inner

Terai districts shows that CFUGs earned a total of about Rs. 48 million, Rs. 78 and Rs. 75 million from the commercial sale of timber and fuel wood outside the FUGs during the fiscal year 2000/01, 2001/02, 2002/03 respectively. Terai CFUGs spend 75 Percent of their total income on various activities such as forest development, community development and other community related activities.

Khadka and Shrestha (2004) reported that a study based on fund mobilization in CF carried out in 2003 Kavre district and Sindhupalchok district which covered 55 CFUGs. This study focused to find out the fund mobilization. CFUG were spending 34 percent of their income on forest management and protection. 17 percent of the fund mobilized the community development sectors like school supports drinking water, health related capacity building etc. Only 4 percent of the fund utilized in the organizational development like stationary. Though fund generation and its mobilization was the ultimate goal of CFUGs to improve their livelihood, the users were not sensitive to and concerned for effective fund management to address basic livelihoods supports. Spending on unproductive items such as CFUG building, stationary tea, snacks and other is high. CFUG members were not concerned to minimize these spending.

Above literatures show, many of the studies related to community forestry were conducted only the field of protection, management as well as sustainable use of community forestry. Several authors, researchers neglected or haven't focused for the economic effect of community forestry. So that this study tried to find out the economic effect of community forestry and various activities of community forestry related to community development and forestry development. This study emphasized also sharing of the benefits from the CF, and resource and funds should be mobilized to improve the social status and livelihood of the people.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Selection of the Study Area

Kankali community forestry is located in Chitwan district at the Ward No. 8 area of Chainpur VDC. 1834 people have been living there as being a community forestry users. It was handed over to the community in 2052 B.S. Evergreen types of forest is there. It is one of the researcher residential area too. Mixture of various ethnic groups have made a community. Local habitants have different political ideologies related to different political parties. People are diverted or the gab between richest and poorest is broad in the contest of economy. The traditional cultural values are not similar between each others. The users area can also be called multicultural area. Some people have spent their life difficulty due to agricultural occupation but for somebody, it is a source of earning.

There is some institutions are working as community development for forestry development sector. The supporting institutions for the Kankali community forest are: National nature conservation fund, institution of science and technology, district forest co-ordination committee, land conservation Makwanpur (Head Office) and district forest federation etc.

3.2 Sources of Data and Information

This study is based on both primary and secondary data as discussed below:

3.2.1 Primary Data Collection

Primary data refers to the information which has originated directly as result of the particular under investigation. Primarily data is mainly collected through structural and unstructured questionnaires of all local users' households survey. The primary data has been required to find out the economic effect of Kankali community forest users. To fulfill the objectives, the data of CF activities, economic and demographic characteristics of local users (size of population, caste, educational status, income of CF and users,

land holding pattern, activities and problems of CF development) are collected by census survey.

3.2.2 Secondary Data Collection

Secondary data on above parameter has also been obtained from various sources. Among the sources of secondary data most significant is the twenty five years of community forestry in Nepal. And other literatures like relevant literatures on community forestry, research works and report journals, newspapers and research articles particularly in Nepal. These reports, records, journals and articles are obtained from LFP, NSCFP, CFP department of forestry, VDC, DFO, and Nepal community forestry Mahashang. Research publications of these several organizations have been thoroughly consulted for the study.

3.2.3 Sample Size

This study has been completed on the basis of census survey method. This study conducted within the users area of Kankali community forestry, including 113 households. Normally, head of each 113 households, who can give the exact detail, were asked questions as questionnaire and by which real data and information were successfully collected.

3.3 Tools and Techniques of Data Collection

Various tools and techniques of data collection have been employed to obtain different types of quantitative/qualitative data and empirical informations. This study mainly based on primarily data collected by using different tools of data collection.

3.3.1 Questionnaire

The questionnaire is a most important tool of a data collection. Therefore probability questions were prepared verifying of various questions, which were result oriented according to the objectives. A survey questionnaire was prepared to local people in order to collect quantitative and qualitative data. Structural questionnaire has been used to get quantitative data is the field of personal identification, population composition, education status, land

holding patterns, forest utilization pattern, activity about community development and forest development as well as income generation etc.

3.3.2 Interview

Interview is a technique of data collection. Interview technique was used to collect empirical information relevant to this study. Interview was taken by all heads of the household. In this case, two methods of questions, the first method of structural and second method of unstructural were asked. One types of interview was taken by the member of CFUG and other was taken by the local users of all households. The interview questions include demographic characteristics, economic characteristics and community development and CF development activities and problems.

3.3.3 Observation

It is a technique of data collection. Some data has been taken on the support of observation, in which the livelihood of the household are included. Non participant observation was held for examining local development activities and the pattern of daily resource use, for which check list is used. It is used to verify information that is gathered by means of other methodologies. Informal interactions are carried out with local people during the study in the village.

3.3.4 Selection of Key Informant

A few informations have been selected to obtain in depth information in the field of history of settlement, history of deforestation stability and change in the forest management system, and change in the attitude of people towards forest conservation etc. The key informants are village elderly people, local political leaders, school teachers, secretary and chairman of Kankali community forestry committee.

3.3.5 Field Dairy

The researcher used a hand dairy to maintain the record of day to day necessary information observed during field survey. It was meant to note supporting information not covered by he survey questionnaires. Important incidents, events and discussions are recorded in the hand diary.

3.4 Method of Data Analysis

In this study the data analysis has been tried to attempt in two methods:

3.4.1 Qualitative Data Analysis

All of the required information can't obtain in terms of numerical form of qualitative form. So some of the informations (economic effect, activities and problems, perceptions of local user) are collected in the form of qualitative data. The qualitative data described in derivative and analytical terms.

3.4.2 Quantitative Data Analysis

The collected data have been classified, tabulated and analyzed in terms of simple statistical tools like frequency, percentage and mean. Descriptive method has been taken into consideration to obtain the basic purpose of the study. Chart, diagram also have been used. Likewise, the map is prepared by GIS software for making an effective.

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CHAPTER IV

DESCRIPTION OF STUDY AREA

4.1 Chitwan District

Chitwan lies in the central part of the Nepal. It is extended in the hactare of 2955 sq. km. and resident population of 472048. Out of them 2,35,084 are males and 2,36,964 are female (CBS, 2001). It is bounded in the north by Tanahun and Dhading district, in the south by India, in the east by Makawanpur district and in the west by Nawalparasi district.

Topographical distribution of land of Chitwan district is shown the table.

Table 1

Topographical Distribution of Land (in hactare)

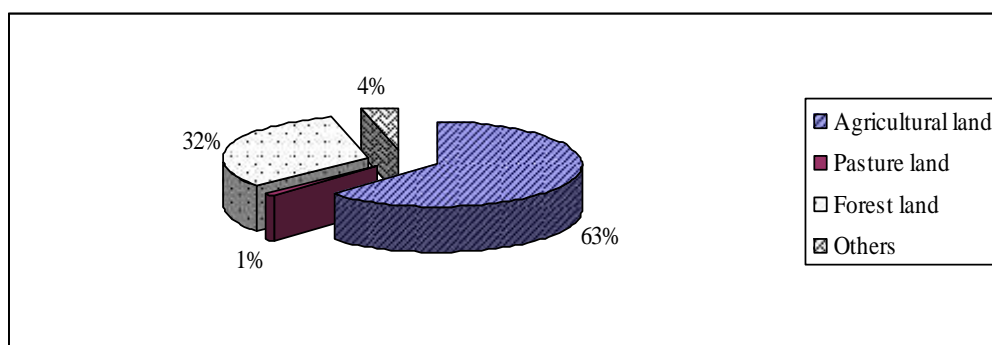
Agricultural		Pasture Land	Forest Land	Others Land	Total Land
Cultivated	Non-Cultivated				
107,334	13,266	2,471	54,691	6,918	1,84,680

Source: District Development Profile of Nepal, 2004.

Out of some districts of Terai, it is one of the most paddy growing zone. Most of the people in rural areas are farmers. Hindu, Muslim and Baudha are main religion of the people. 36 VDC and two municipality (i.e. Bharatpur municipality and Ratnanagar municipality) are in this district and 204046 populations are economically active and 268002 are inactive (District Department Profile of Nepal, 2004).

Figure 1

Land Distribution by Utilization



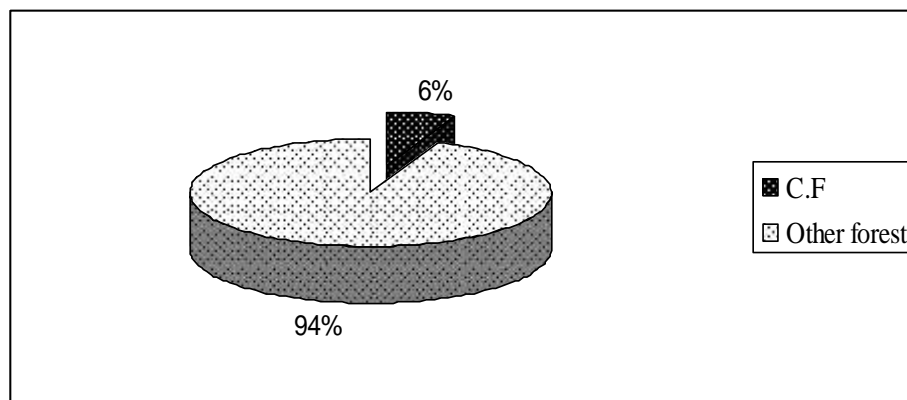
The area of total land of Chitwan district is 184680 hectare. Some of the lands which are able to cultivate and some of them are barren. Some the lands are pasture which cover 1.34 percent of total land. Some of the lands are sandy edges of rivers. The cultivated land covers 58.12 percent of the total land. The forest land covers 29.61 percent which is similar to national level of forest. It is also called that *Hariyo Ban Nepal Ko Dhan* but forest area has been decreasing for some decade. After the introduced of community forestry, the area of forest has been increasing which is shown in published or non-published data book.

4.1.1 The Forest Resources of Chitwan District

Forest covers 29.61 percent of total land area of Chitwan district. But community forest covers only 5.60 percent of total forestry land. Sal, Simal, Shisau, Botdhager, Haro, Bare are the main trees of the forest. None NGO, INGO and agency, besides district forest office are involved in community forestry development programs in this district. Till the fiscal years 2061/62, 3060 hectares of forest is handed over to 26 forest user groups, representing 7840 households (Community Forestry Division, Department of Forest, 2005).

Figure No. 2

Portion of CF in Total Forest Area



Large numbers of forest lands are rest to hand over to the community. Handovering the forest to the local community for protection management and use is the main policy of HMG. Thus many users are encouraged to take forestry into community forestry in Chitwan district.

4.1.2 Chainpur Village Development Committee

Chainpur VDC is situated in the eastern part of the Chitwan district. Mahendra Highway passed along the Chainpur VDC. This VDC is divided into 9 Wards. Ward No. 2 is also one of the form of town.

Chainpur VDC has diverse caste/ethnicity such as Bramin, Chhetri, Gurung, Tamang, Newar, Damai, Kami etc. The total households of the VDC is 4638 with the total population of 14,832, males are 7,392 and females are 7,440. The average size of family is 5.5 persons per households. Chainpur VDC is predominantly an agriculture as a main occupation. Some of the people have their own shops. Some of the people have gone to the foreign country. Electricity is available all over the VDC. Some of the telephone lines are distributing in limited area. Two private secondary school, two government secondary school are there and a health post is also there. There is one forest range post, gives the training and suggestions to the newly formed CFUGs. Forest area is growing rapidly, after the established of this range post.

4.2 Kankali Community Forest and Its User Group

Local people of the Kankali community forest had started the forest protection since 2047 B.S., user groups construction 2052 B.S. and the CF handed over the community in 2052 B.S. The area of CF is 760.73 hectare by growing the forest. The total households of the users are 1,834. It is divided into three blocks. Kankali community forest is bounded in the south by Mahendra highway, in the north by Siddhipur settlement and user's residential area, in the west by Bahera and Ratna Nagar Municipality in the east by Birendra Nagar VDC.

It has a committee of community forestry user's group with the 17 members and a executive committee with 4 members. All of them are the forest user groups. An election holds in every two years for the selection of CFUG committee members.

The forest user group has specified the following objectives for the management protection and utilization of the forest.

- i. To fulfill the basic needs of users for forest production such as fuel wood, fodder and timber on a sustain basis.
- ii. To increase the greenery of the area.
- iii. To improve the forest condition by protection, promotion of CF.
- iv. To conduct community development activities with the fund from income generating activities in the forest.
- v. To increase the productivity of land.

4.3 Other General Information about the Kankali Community Forest Area

4.3.1 Population Composition

The role of population is vital for the utilization management and protection of community forestry. So that community forestry resource. The population composition is given the below:

Table No. 2

Population Composition

No. of households	No. of male	Percent	No. of female	Percent
1,834	856	46.65	978	53.35

Source: Field Survey, Sept., 2009.

The female population is greater than male population by the percent of 7. The total households are 1,834 in which 856 (46.65%) are males and 978 (53.35%) are females. About fifth decade age, this area was covered by forest. Immigrating number of the people from some neighboring districts, rapidly increased after the alleviation of malaria in Tarai zone, particularly in this area, then they started in deforest and established their settlement illegally.

4.3.2 Ethnic Composition

Kankali community forest is inhabited by ten ethnic groups. So it is one of the multiethnic or multicultural area.

Table No. 3**Ethnic Composition**

Ethnic group	Household No.	Percent
Brahmin	990	53.98
Chhetri	227	12.39
Rai	244	13.28
Limbu	179	9.74
Tamang	49	2.66
Newar	65	3.54
Magar	16	0.88
Gurung	32	1.77
Khabas	16	0.88
Kami	16	0.88
Total	1,834	100

Source: Field Survey, Sept., 2009.

A large portion (53.98%) of the users are Brahmin and Rai (13.28%). Magar, Kami and Khabas castes are fewest (0.88%) in number. All of the residents are Pahadiya not Madhisiya ethnic group. More than a quarter of residents are 'Janajati' ethnic groups. One household is Dalit of Kami. Some of the Rai and Limbu are immigrated from Panchthar and Taplejung districts.

4.3.3 Occupation Composition

Agricultural is the main occupation in Nepal. So as it is in this study area. About all agricultural land in this area is under the Brahmin, Chhetri and Tamang/Gurung. The nominal land belongs to others. Kami has own his traditional profession to make agricultural equipment from iron.

Table No. 4**Occupational Composition**

Occupations	No. of respondents	Percent
Agriculture	95	84.07
Service	3	2.65
Wage labour	12	10.62
Shop	2	1.77
Traditional profession	1	0.88
Total	133	100

Source: Field Survey, Sept., 2009.

Nearly 66 percent Nepalese people are farmers. Agricultural in the dominant exercise of Nepalese people and also a source of living. 84% of the

respondents are engaging on the agricultural activities, which contributed more than 80 percent in their economy. It is a main source of their employment. 10.62 percent people are working as a wage laborer.

Two respondents have engaged in small shops in the same village. A Kami household has his traditional profession of making iron goods (agricultural equipment). Some of the households members are working in outside the country.

4.3.3 Animal Husbandry

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

Table No. 5

Animal Husbandry of Household

Households	Animals	Number of animal
107	Cows/oxen	218
50	Buffaloes	62
111	Goats	325
34	Pigs	136
80	Chicken	835
23	Ducks	155

Source: Field Survey, Sept., 2009.

Animal husbandry is one of the most income generating activity of Kankali community forestry users. It is the second source of income earning crop farming.

Similarly, all of the households have kept all kinds of animals. Some ethnic groups are allowed to keep some kind of animals such as pig, by the social cultural value. Often goats are kept in all households. Due to the high cost of buffaloes, only limited households are able to keep these.

4.3.4 Educational Status

Educational status can represent the economic status partially because it is a human resource. In this study educational status has been classified into four groups. They are:

- Illiterate
- Literate
- Secondary
- Higher education.

Illiterate are those who can't read and write Nepali and literate are those who can read and write. Secondary education means SLC passed and higher education means intermediate level passed and above.

Table No. 6

Educational Status

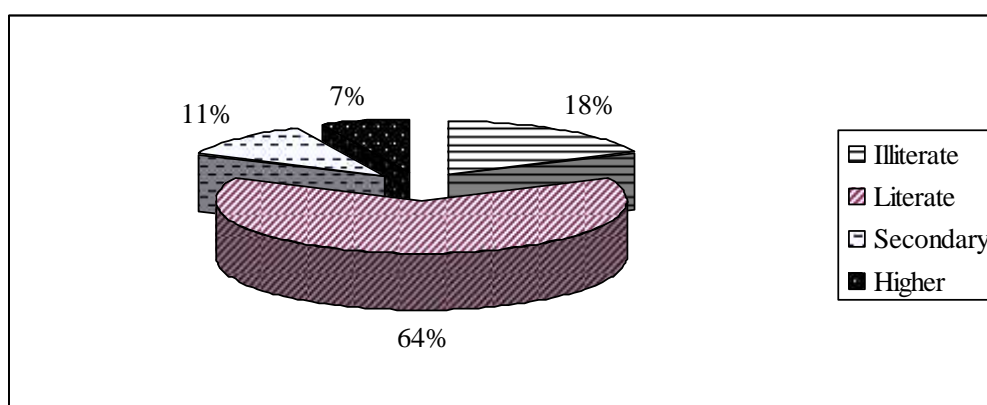
Level of Education	No of Respondent	Percent
Illiterate	20	17.70
Literate	72	63.72
Secondary	13	11.50
Higher	8	7.08
Total	133	100

Source: Field Survey, Sept., 2009.

Similarly, all of the families are male dominants only a few or negligence number of the families are female dominants, so all the interviews are taken from male respondents beside some females. Majority of females are illiterate.

Figure No. 3

Educational Status



Out of the 133 male respondents, 17.760 percent are illiterate and 63.72 percent are literate. 11.50% masters of the household have received secondary education. 7.08 percent respondents have taken higher education. Rest of all are deprived by the bright sun of education.

4.3.5 Land Holding Pattern

Land holding determine the income and food sufficiency of the people. The more land, the more income and less land, less income. The cultivated land of this study area is more productive. So no more than 2^{1/2} bigaha of land per household. All of the cultivated lands are covered by crops (paddy, maize, wheat etc.) besides vegetable growing land around the house.

Table No. 7
Land Distribution by Household

Land area (in Kattha)	No. of Household	Percent
Landless	3	2.65
0-5	7	6.19
5-10	6	5.13
10-15	23	20.35
15-20	13	11.50
20-25	10	8.85
25-30	16	14.16
30-35	6	5.13
35-40	21	18.58
More than 40	8	7.08
Total	133	100

Source: Field Survey, Sept., 2009.

The pattern of land distribution varies from high class to lower class. Three households of this area are landless. They have taken the land from landlord for cultivation with rent.

More than 70 percent households have occupied less than 30 percent of total land.

The dissimilarity on land ownership of farmers seem very irrational. Only 7 percent people have more than two bigahas of land. Majority of the

households (20%) have 10-15 Kattha land. Agricultural practice being done on land by the land less and tenant farmers as well as agricultural labours who has not any piece of land.

4.3.7 Food Sufficiency of Household

Food sufficiency encompasses food availability, affordability and social acceptance as well.

Food sufficiency is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their daily needs and food preference for an active and healthy life. There are three interlinked components of food sufficiency food availability, food access and food utilization.

Table No. 8

Food Sufficiency of the Households

Particulars	No. of households	Percent
Food Server	8	7.08
Sufficient for house consumption	66	58.41
Not sufficient for house consumption	39	34.51
Total	133	100

Source: Field Survey, Sept., 2009.

The table given above shows that out of 133 households survey, 8 households are food server which is 7.08 percent of total survey. 58.41 percent households have sufficient food for their family consumption for the whole year. 34.51 percent households do not have sufficient food for a year. So they have to depend upon other sector for life subsistence. These households, which are under the poverty line, have always remained vulnerable to food shortages and these limited households which are above the poverty line, have always been a surplus food producer.

CHAPTER V

COMMUNITY FORESTRY USER GROUPS ACTIVITIES

5.1 Community Development Activities Undertaken by Kankali Community Forest User Group

Community development activities are essential to improve the quality of life and to empower the local people. For the sake of well being of local people, different organizations are involved in carrying out community development activities (CDAs) in the rural areas with regard to community development. Village development committee or the local level unit of the government also been focusing on basic needs of the local people in supporting the construction and repairs of community development projects such as health care, drinking water, schools, trails and bridges, irrigation and sanitation.

There is a close relationship between rural development and natural resources and local people are encouraged for the promotion and conservation of forest as well as for community development. Community development programme directly address the needs and benefit the groups by increasing access to basic services. CFUG has been conducting various CDAs. The CFUG has been involved in community development works such as improving trails, building community halls, school buildings, electricity, swimming pool and rest places etc. Some of the CDAs undertaken by Kankali community forest user groups have been analyzed as follows:

5.1.1 School Support

CFUG has highly contributed to the educational sector in many ways. Kankali community forest user group has been providing timber required for the construction of school building free of cost, for this school within the community and with low cost to the school outside the community. CF is the main source of timber for school construction and maintenance. It has also financially helped to the informal education program (Adolescent education) by managing on teacher from the fund of user group.

5.1.2 Irrigation

The construction of canal has been finished specially for irrigation of 200 hectares of land of Chainpur VDC Ward No. 8. In community forest, the volume of economic and technical problem is greater than others. In this way, the people of CFUGs have constructed the canal without wage. Chainpur VDC also supported to construct this canal. Many farmers within community forestry are advantaged by this canal. Many farmers within community forestry are advantaged by this canal to produce much crops and vegetables from barren land.

5.1.2 Trail Improvement

CFGU has been found to use their organizational mechanism to mobilize the human and other resources available to improve the trails to and from the roads and trails in order to facilitate easy mobility and transportation. Kankali CFUG has used the group fund to the extent possible to improve the trail from Bughachok to Khageri Khola for the construction and improvement of the trail, they have collaborated with other organizations including local mothers groups, VDC and DDC. The Kankali CFUG has regularly been maintaining the trail near the forest. Both human capital as well as financial capital is used for the activity. The direct expenditure on the hired labour was discarded. Only in a situation when there is no alternative to the use of financial capital for the improvement of trails, they have used the group fund.

5.1.3 Community Building Construction and Rest House Construction

The Kankali CFUG has provided grass, fodder and left litter free of cost for construction of a community building. It has also constructed a rest house near the forest area by mobilizing human as well as financial capital.

5.1.4 Macro Finance and Service

Main sources of Kankali CFUG fund are the sale of timber and fees, fines, and financial support from other organization. CFUGs utilize their fund towards micro credit and financial services at local level. CFUG members who need credit from the CF fund have to apply to the user's committee with details of the loan utilization. Loan money is utilized to buy goats, pigs, chicken, vegetable farming and to run small shops. Thus micro credit has helped the

poor people in the community to improve their income. Despite its small scale, micro credit is providing optimum benefit to the local people.

5.1.6 Bridge Construction

The most investment of Kankali CFUG fund is utilized for the construction of Colvote and bridge. Nearly one dozen Colvote and bridge are constructed on road and over the channel and small rivers. CFUG provided their fund as a grant to outside for the construction of swimming pool, poll of electricity and others. Besides these, Kankali CFUG utilized their fund for graveling the roads.

5.1.7 Protection Activities

The user committee imposes penalties on members of the user group, if they illegally harvest the products for the first time, the members are told not to do again. If they harvested again, a cash fine is imposed usually the chairman of the committee assisted by other executive members decide the appropriate penalty. A Kami member is appointed a team leader to take care and supervise the forest from illegal doing. The committee keep record, which are accessible to all the users. The general protection system are mentioned in following table.

Table No. 9

Forest Protection System

Description	Protection System
Fire	<ul style="list-style-type: none"> - No permission to enter the forest taking matches, cigarettes in fire prone period - Extension FUG, range post and clubs - Penalties for intentional fire
Grazing	<ul style="list-style-type: none"> - Prohibition to graze - Penalties for rule breaker
Tree species (seeding, shrub, sapling, poles) cutting	<ul style="list-style-type: none"> - No permission to go to the forest taking knife exception prescribed time - Penalties for rule breaker
Forest Patrolling	<ul style="list-style-type: none"> - Patrolling is done by CFUG themselves, taking equal responsibility and also by appointed watcher.

Source: Field Survey, Sept., 2009.

The protection system was prepared by the user group assembly and CF operational plan documented it very clearly. This system can be reviewed and revised by CFUG to make betterment for their forest protection management and efficient use.

5.1.8 People Participation Activities

Level of people participation is difference in community forestry management. Significantly with the respect to work that is mentioned the following table.

Table No. 10
Level of Participation

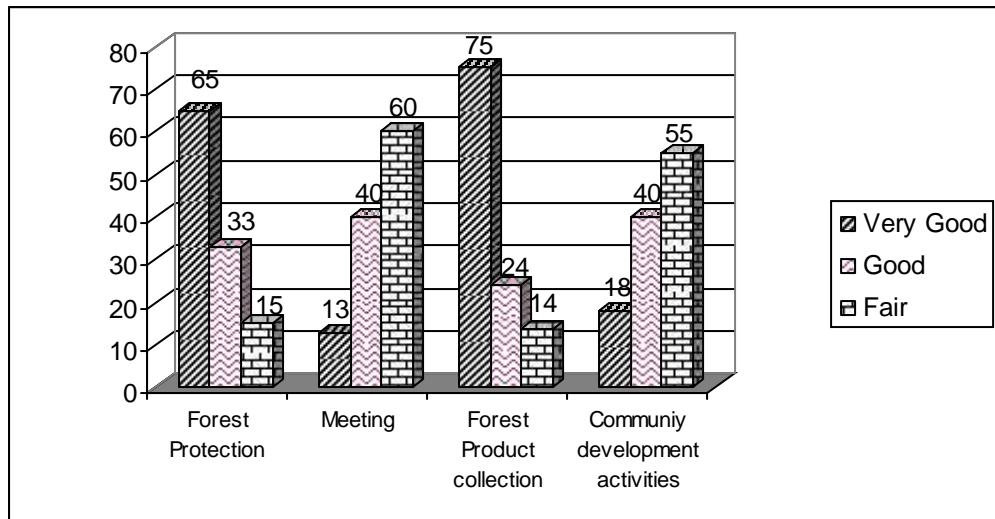
Nature of Works	Participation No. of respondents			
	Very Good	Good	Fair	Total
Forest protection	65.(57.52)	33 (29.21)	15 (13.27)	133(100)
Meeting	13 (11.50)	40 35.40)	60 (53.10)	133(100)
Forest product collection	75 (33.37)	24 (21.23)	14 (12.40)	133(100)
Community development	18 (15.93)	40 (35.23)	55 (48.68)	133(100)

Source: Field Survey, Sept., 2009.

Level of participation shows that the motivation extension and awareness are being disseminated and participation is increasing in any community forest development activities but it depends on the direct benefits of the people such that they will get fodder and fuel wood from thinning and pruning operations, thus level of participation is very high in this regard. According to informal discussion with labour charge, level of participation might be increased similarly. If the direct and indirect incentive is provided to other communal works, the participation will be increased.

Figure No. 4

Level of Participation



According to majority of the respondents reported that high level participation of users on the task of forest product collection nearly 66 percent. People participate actively with the respect of forest product distribution. It is seen that the low level of participation in the task of meeting and community development activities.

5.1.9 Community Support Program

Supporting agency plays a key role to contribute the successful community and community forestry development. Different types of supports make the strong community. Although none significant agency involves for the community forestry development some agencies have supported to the community development. They had supported economic and technical aspect once a time. The detail is mentioned the following.

Table No. 11

Agencies and their Tasks

Name of Agency	Name of supported task	Type of support
RRN	Construction	Economic
VDC	Construction	Economic and technical
DFO	Human resource building	Training/tour/administrative
Range post	Advice	Technical/ administrative

Source: Field Survey, June 2005.

Although there are so many NGOs and INGOs are involved in community forestry sectors, total CFUGs. Rural Reconstruction of Nepal (RRN) support the construction of bridge in Kankali CF area. The support of RRM is only economic but it is not clearly showed the amount of support.

The role of VDC is great for the construction of rural road and its gravel. For this, VDC used human resource, economic resource and other technical resource with its fund. So villagers are benefited to transport their agricultural products to the market. DFO (District Forest Office) provides the administrative advise to the CFUG and conduct some training program for CFUG in district level. But some committee members are able to take such types of training and tour. According to some users, the roles of DFO and range post are not as much as required.

5.2 Income Generating Activated through Community Forestry

5.2.1 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 No. 12

Forest Based Enterprises

Name of Enterprises	No. of Enterprise	Household Involved	Persons Involved
Furniture	2	-	8
Sal leaf plate	-	4	4
Beehives	10	10	-
Aran	1	1	2

Source: Field Survey, Sept., 2009.

More than one dozen household/persons have got employment and involved in income generating activities through the CF. 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 Aran (Agricultural Equipment by Iron).

5.2.2 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. Majority of the loan form revolving funds (63%) are invested in livestock rearing such as goats, buffaloes, pigs and chicken.

Table No. 13
Revolving Fund Disbursement

Fund Utilization	No. of Household	Percent
Domestic Purpose (For basic needs)	13	23.64
Keeping goats, pigs, etc.	35	63.67
To pay loan	7	12.72
Total	55	100.00

Source: Field Survey, Sept., 2009.

It is found that only 48.67% local users have taken fund for domestic purpose (23.64%), keeping animal (63.64%) and paying loan (13.72%)

5.2.3 Indirect Income form the Source of Forest Product

The villagers mainly depend upon firewood, fodder as well as timber. Firewood is used as the source of energy and fodder for livestock. So that to fulfill the demand of these forest products for the local users, Kankali Community forestry has played the vital role in this area.

Table No. 14
Indirect Income form Forest Products

Source	Consumption Unit	Market Price	Total Price (RS.)
Fuel wood (in Bhari)	226	Rs 40/30 Kg	9040 (19.01%)
Fodder (in Bhari)	339	RS 20	6780 (14.26%)
Timber (in cubic feet)	705	Rs 45	31725 (66.73%)
Total			47545 (100%)

Source: Field Survey, Sept., 2009.

Community forestry has provided similar as Rs. 47545 benefit to the local users last year. In which fuel wood, fodder and timber contributed the advantage of 19%, 14% and 66% respectively. People were provided 3000 cu. ft. cubic feet timber last year, which accounts for Rs 12,00,000.00. Timber products play most significant role rather than fodder and fuel wood. People saved Rs. 904 from the fuel wood, which has been spent to fulfill their need of fuel wood. Fuel wood is distributed from CF according to the family size with nominal charges of Rs 20 per *Bhari*. Kankali CF is opened in the winter season for dry fodder, in summer; green grasses are used mainly to feed livestock. CF could not provide the all demand of fodder and green grass, so they have been using their farmland too.

CF contributed 339 *Bhari* fodder last year, which saved Rs. 6780 of the local users. It is indirect earning not direct money income, otherwise saving money should be spend for the fulfillment of these forest products.

5.3 Income and Expenditure of the Kankali Community Forestry User Group

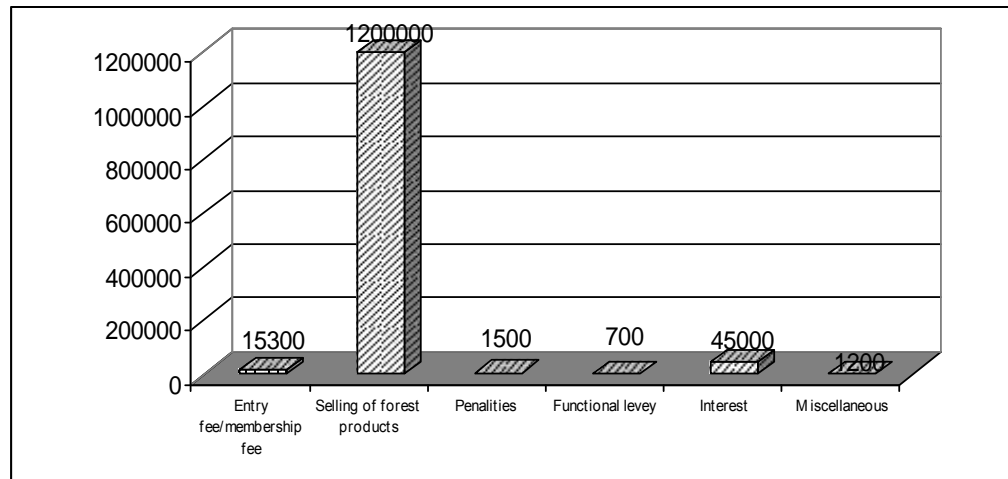
5.3.1 Sources of Income

The CFUG has been generating income from various activities, such as selling of forest products, penalties, entry fees or membership fees and functional levy. They have not collected money form the investment in different infrastructures (Rural Roads, Irrigation and Colvote). In CFUG, the

interest obtained from the deposit of the bank contributed a significant amount of money. The income collected for last five years from different activities are shown in the table (Appendix 11).

Figure No. 5

Sources of Income



It can be seen from the above figure at the major source of income (84%) is form the selling of forest products (timber, non timber) CFUG have earned from he second significant amount of money (10.88%) from the interest of the amount deposited in bank and local people.

The Kankali CFUG generated 4.23% of total income from entry fees, penalties and functional levy. Local people have to pay 5,000 to a user member of CF. It is the big amount for poor people.

5.3.2 Areas of Expenditure

Mobilization of the fund is community development was major activity with 51.28% of spending. This is one of the highly demanded activity in the community as it is directly linked to the welfare of the community. Area of expenditure is shown on the below figure.

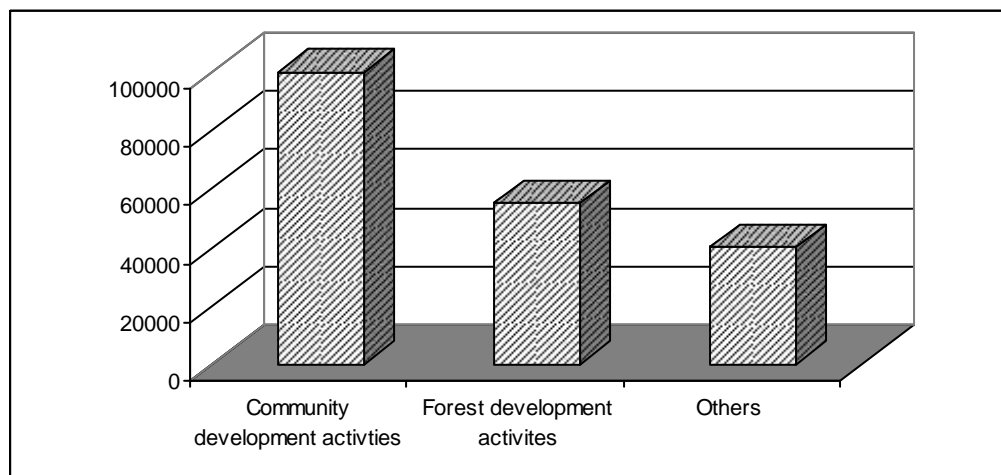
Forest development activity has covered the second major area of the investment in Kankali community forest user group, 28.2% of the fund was used for forest protection works. CFUG has used 15.38% of fund in plantation and nursery. CFUG has spent more than 50% fund to the community related activities such as school support (teacher salary and infrastructure) irrigation,

Health related activity road, construction and gravelling, capacity building (literacy, training, vegetable seeds, toilet and bridge). Some of the community development works were also carried out jointly with the financial support from RRN, However it was not clear that how much external fund has been used. 15% fund was spent organizational development related to stationary such as stationary furniture, tea/snacks, auditing. Some people are hired (within the FUG) to carry out plantation and harvesting effectively and systematically. It is shown that the involvement of hired labour for carrying out silvicultural operations involved some amount of expenditure of funds. They are not well trained and not efficient to conduct the forest management operations.

Through fund generation and its mobilization is the ultimate goal of CFUG to improve their livelihood. The below figure has shown the comparison of fund used between forest development activities and community development activities.

Figure No. 7

Utilization of Fund Compression between FDA and CDA



While comparing the allocation of the fund, it is also found that the CFUG of Kankali community forest has spent much of their fund in community development activities.

After CDA, forest development activity has been given second priority. The overall expenditure in official works covered only a small amount of fund.

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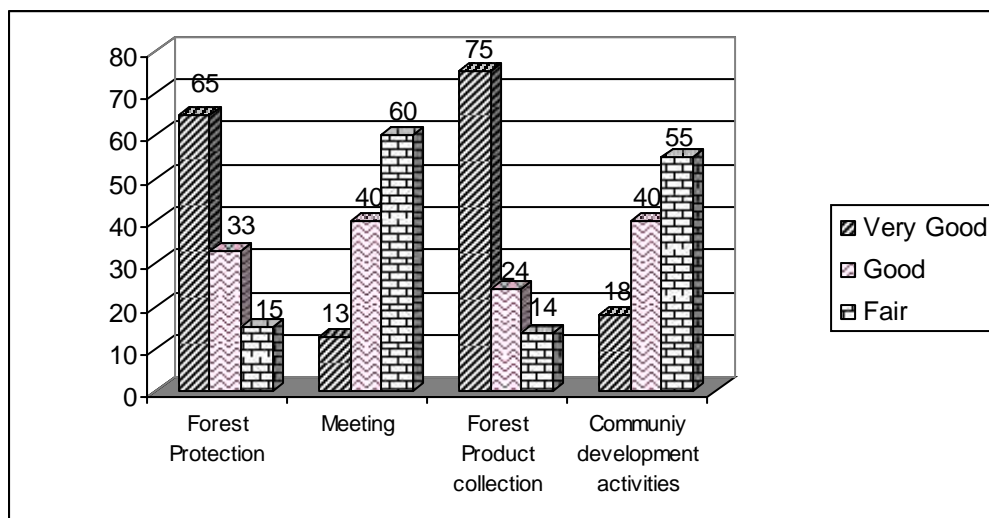
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It is found that only 48.67% local users have taken fund for domestic purpose (23.64%), keeping animal (63.64%) and paying loan (13.72%)

5.3.4 Indirect Income form the Source of Forest Product

The villagers mainly depend upon firewood, fodder as well as timber. Firewood is used as the source of energy and fodder for livestock. So that to fulfill the demand of these forest products for the local users, Kankali Community forestry has played the vital role in this area.

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Source: Field Survey, Sept., 2009.

Community forestry has provided similar as Rs. 47545 benefit to the local users last year. In which fuel wood, fodder and timber contributed the advantage of 19%, 14% and 66% respectively. People were provided 3000 cu. ft. cubic feet timber last year, which accounts for Rs 12,00,000.00. Timber products play most significant role rather than fodder and fuel wood. People saved Rs. 904 from the fuel wood, which has been spent to fulfill their need of fuel wood. Fuel wood is distributed from CF according to the family size with nominal charges of Rs 20 per *Bhari*. Kankali CF is opened in the winter season for dry fodder, in summer; green grasses are used mainly to feed livestock. CF could not provide the all demand of fodder and green grass, so they have been using their farmland too.

CF contributed 339 *Bhari* fodder last year, which saved Rs. 6780 of the local users. It is indirect earning not direct money income, otherwise saving money should be spend for the fulfillment of these forest products.

5.4 Income and Expenditure of the Kankali Community Forestry User Group

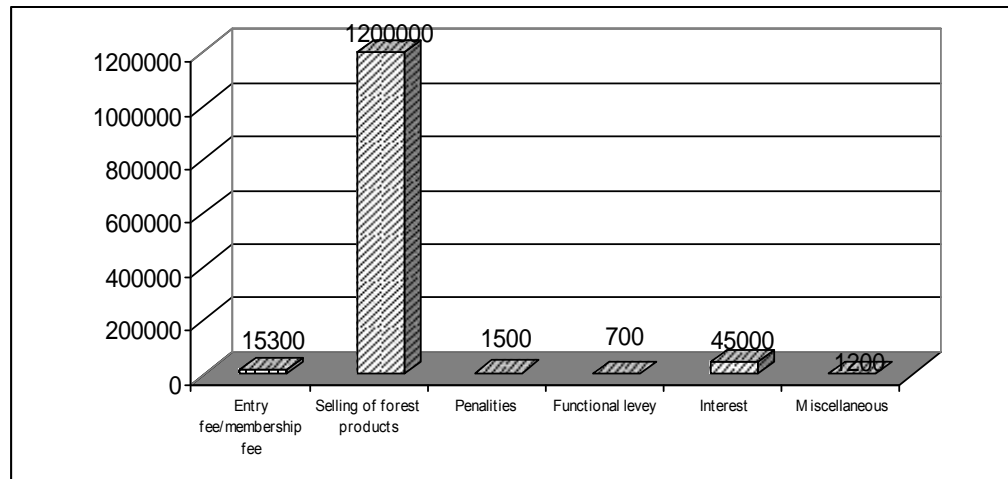
5.3.1 Sources of Income

The CFUG has been generating income from various activities, such as selling of forest products, penalties, entry fees or membership fees and functional levy. They have not collected money form the investment in different infrastructures (Rural Roads, Irrigation and Colvote). In CFUG, the

interest obtained from the deposit of the bank contributed a significant amount of money. The income collected for last five years from different activities are shown in the table (Appendix 11).

Figure No. 5

Sources of Income



It can be seen from the above figure at the major source of income (84%) is from the selling of forest products (timber, non timber) CFUG have earned from the second significant amount of money (10.88%) from the interest of the amount deposited in bank and local people.

The Kankali CFUG generated 4.23% of total income from entry fees, penalties and functional levy. Local people have to pay 5,000 to a user member of CF. It is the big amount for poor people.

5.4.2 Areas of Expenditure

Mobilization of the fund in community development was major activity with 51.28% of spending. This is one of the highly demanded activity in the community as it is directly linked to the welfare of the community. Area of expenditure is shown on the below figure.

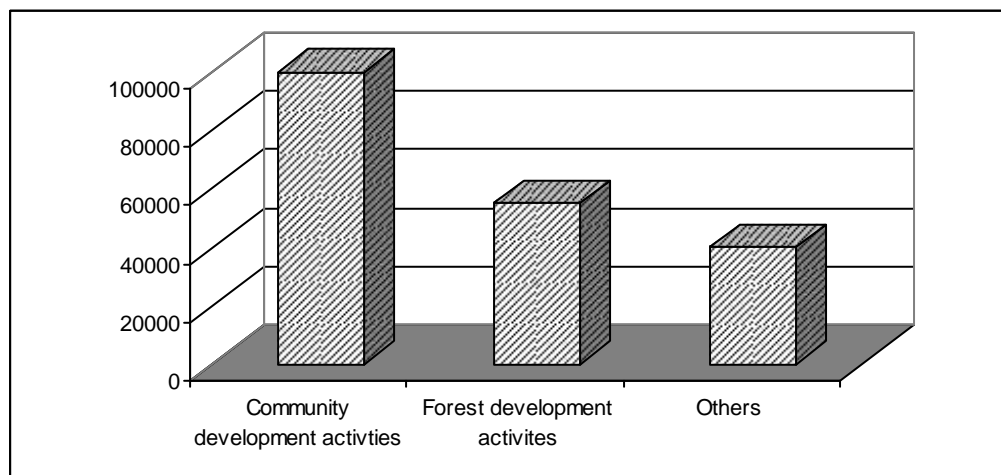
Forest development activity has covered the second major area of the investment in Kankali community forest user group, 28.2% of the fund was used for forest protection works. CFUG has used 15.38% of fund in plantation and nursery. CFUG has spent more than 50% fund to the community related activities such as school support (teacher salary and infrastructure) irrigation,

Health related activity road, construction and gravelling, capacity building (literacy, training, vegetable seeds, toilet and bridge). Some of the community development works were also carried out jointly with the financial support from RRN, However it was not clear that how much external fund has been used. 15% fund was spent organizational development related to stationary such as stationary furniture, tea/snacks, auditing. Some people are hired (within the FUG) to carry out plantation and harvesting effectively and systematically. It is shown that the involvement of hired labour for carrying out silvicultural operations involved some amount of expenditure of funds. They are not well trained and not efficient to conduct the forest management operations.

Through fund generation and its mobilization is the ultimate goal of CFUG to improve their livelihood. The below figure has shown the comparison of fund used between forest development activities and community development activities.

Figure No. 7

Utilization of Fund Compression between FDA and CDA



While comparing the allocation of the fund, it is also found that the CFUG of Kankali community forest has spent much of their fund in community development activities.

After CDA, forest development activity has been given second priority. The overall expenditure in official works covered only a small amount of fund.

CHAPTER V

COMMUNITY FORESTRY USER GROUPS ACTIVITIES

5.3 Community Development Activities Undertaken by Kankali Community Forest User Group

Community development activities are essential to improve the quality of life and to empower the local people. For the sake of well being of local people, different organizations are involved in carrying out community development activities (CDAs) in the rural areas with regard to community development. Village development committee or the local level unit of the government also been focusing on basic needs of the local people in supporting the construction and repairs of community development projects such as health care, drinking water, schools, trails and bridges, irrigation and sanitation.

There is a close relationship between rural development and natural resources and local people are encouraged for the promotion and conservation of forest as well as for community development. Community development programme directly address the needs and benefit the groups by increasing access to basic services. CFUG has been conducting various CDAs. The CFUG has been involved in community development works such as improving trails, building community halls, school buildings, electricity, swimming pool and rest places etc. Some of the CDAs undertaken by Kankali community forest user groups have been analyzed as follows:

5.3.1 School Support

CFUG has highly contributed to the educational sector in many ways. Kankali community forest user group has been providing timber required for the construction of school building free of cost, for this school within the community and with low cost to the school outside the community. CF is the main source of timber for school construction and maintenance. It has also financially helped to the informal education program (Adolescent education) by managing on teacher from the fund of user group.

5.1.2 Irrigation

The construction of canal has been finished specially for irrigation of 200 hectares of land of Chainpur VDC Ward No. 8. In community forest, the volume of economic and technical problem is greater than others. In this way, the people of CFUGs have constructed the canal without wage. Chainpur VDC also supported to construct this canal. Many farmers within community forestry are advantaged by this canal. Many farmers within community forestry are advantaged by this canal to produce much crops and vegetables from barren land.

5.3.2 Trail Improvement

CFGU has been found to use their organizational mechanism to mobilize the human and other resources available to improve the trails to and from the roads and trails in order to facilitate easy mobility and transportation. Kankali CFUG has used the group fund to the extent possible to improve the trail from Bughachok to Khageri Khola for the construction and improvement of the trail, they have collaborated with other organizations including local mothers groups, VDC and DDC. The Kankali CFUG has regularly been maintaining the trail near the forest. Both human capital as well as financial capital is used for the activity. The direct expenditure on the hired labour was discarded. Only in a situation when there is no alternative to the use of financial capital for the improvement of trails, they have used the group fund.

5.3.3 Community Building Construction and Rest House Construction

The Kankali CFUG has provided grass, fodder and left litter free of cost for construction of a community building. It has also constructed a rest house near the forest area by mobilizing human as well as financial capital.

5.3.4 Macro Finance and Service

Main sources of Kankali CFUG fund are the sale of timber and fees, fines, and financial support from other organization. CFUGs utilize their fund towards micro credit and financial services at local level. CFUG members who need credit from the CF fund have to apply to the user's committee with details of the loan utilization. Loan money is utilized to buy goats, pigs, chicken, vegetable farming and to run small shops. Thus micro credit has helped the

poor people in the community to improve their income. Despite its small scale, micro credit is providing optimum benefit to the local people.

5.1.6 Bridge Construction

The most investment of Kankali CFUG fund is utilized for the construction of Colvote and bridge. Nearly one dozen Colvote and bridge are constructed on road and over the channel and small rivers. CFUG provided their fund as a grant to outside for the construction of swimming pool, poll of electricity and others. Besides these, Kankali CFUG utilized their fund for graveling the roads.

5.3.7 Protection Activities

The user committee imposes penalties on members of the user group, if they illegally harvest the products for the first time, the members are told not to do again. If they harvested again, a cash fine is imposed usually the chairman of the committee assisted by other executive members decide the appropriate penalty. A Kami member is appointed a team leader to take care and supervise the forest from illegal doing. The committee keep record, which are accessible to all the users. The general protection system are mentioned in following table.

Table No. 9

Forest Protection System

Description	Protection System
Fire	<ul style="list-style-type: none"> - No permission to enter the forest taking matches, cigarettes in fire prone period - Extension FUG, range post and clubs - Penalties for intentional fire
Grazing	<ul style="list-style-type: none"> - Prohibition to graze - Penalties for rule breaker
Tree species (seeding, shrub, sapling, poles) cutting	<ul style="list-style-type: none"> - No permission to go to the forest taking knife exception prescribed time - Penalties for rule breaker
Forest Patrolling	<ul style="list-style-type: none"> - Patrolling is done by CFUG themselves, taking equal responsibility and also by appointed watcher.

Source: Field Survey, Sept., 2009.

The protection system was prepared by the user group assembly and CF operational plan documented it very clearly. This system can be reviewed and revised by CFUG to make betterment for their forest protection management and efficient use.

5.3.8 People Participation Activities

Level of people participation is difference in community forestry management. Significantly with the respect to work that is mentioned the following table.

Table No. 10
Level of Participation

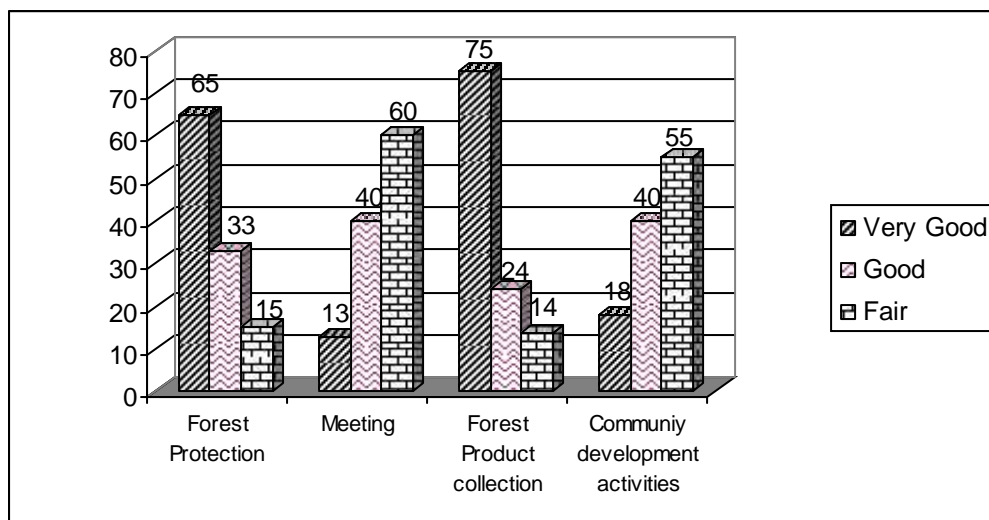
Nature of Works	Participation No. of respondents			
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Forest protection	65.(57.52)	33 (29.21)	15 (13.27)	133(100)
Meeting	13 (11.50)	40 35.40)	60 (53.10)	133(100)
Forest product collection	75 (33.37)	24 (21.23)	14 (12.40)	133(100)
Community development	18 (15.93)	40 (35.23)	55 (48.68)	133(100)

Source: Field Survey, Sept., 2009.

Level of participation shows that the motivation extension and awareness are being disseminated and participation is increasing in any community forest development activities but it depends on the direct benefits of the people such that they will get fodder and fuel wood from thinning and pruning operations, thus level of participation is very high in this regard. According to informal discussion with labour charge, level of participation might be increased similarly. If the direct and indirect incentive is provided to other communal works, the participation will be increased.

Figure No. 4

Level of Participation



According to majority of the respondents reported that high level participation of users on the task of forest product collection nearly 66 percent. People participate actively with the respect of forest product distribution. It is seen that the low level of participation in the task of meeting and community development activities.

5.3.9 Community Support Program

Supporting agency plays a key role to contribute the successful community and community forestry development. Different types of supports make the strong community. Although none significant agency involves for the community forestry development some agencies have supported to the community development. They had supported economic and technical aspect once a time. The detail is mentioned the following.

Table No. 11

Agencies and their Tasks

Name of Agency	Name of supported task	Type of support
RRN	Construction	Economic
VDC	Construction	Economic and technical
DFO	Human resource building	Training/tour/administrative
Range post	Advice	Technical/ administrative

Source: Field Survey, June 2005.

Although there are so many NGOs and INGOs are involved in community forestry sectors, total CFUGs. Rural Reconstruction of Nepal (RRN) support the construction of bridge in Kankali CF area. The support of RRM is only economic but it is not clearly showed the amount of support.

The role of VDC is great for the construction of rural road and its gravel. For this, VDC used human resource, economic resource and other technical resource with its fund. So villagers are benefited to transport their agricultural products to the market. DFO (District Forest Office) provides the administrative advise to the CFUG and conduct some training program for CFUG in district level. But some committee members are able to take such types of training and tour. According to some users, the roles of DFO and range post are not as much as required.

5.4 Income Generating Activated through Community Forestry

5.2.1 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 No. 12

Forest Based Enterprises

Name of Enterprises	No. of Enterprise	Household Involved	Persons Involved
Furniture	2	-	8
Sal leaf plate	-	4	4
Beehives	10	10	-
Aran	1	1	2

Source: Field Survey, Sept., 2009.

More than one dozen household/persons have got employment and involved in income generating activities through the CF. 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 Aran (Agricultural Equipment by Iron).

5.4.3 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. Majority of the loan form revolving funds (63%) are invested in livestock rearing such as goats, buffaloes, pigs and chicken.

Table No. 13
Revolving Fund Disbursement

Fund Utilization	No. of Household	Percent
Domestic Purpose (For basic needs)	13	23.64
Keeping goats, pigs, etc.	35	63.67
To pay loan	7	12.72
Total	55	100.00

Source: Field Survey, Sept., 2009.

It is found that only 48.67% local users have taken fund for domestic purpose (23.64%), keeping animal (63.64%) and paying loan (13.72%)

5.4.4 Indirect Income form the Source of Forest Product

The villagers mainly depend upon firewood, fodder as well as timber. Firewood is used as the source of energy and fodder for livestock. So that to fulfill the demand of these forest products for the local users, Kankali Community forestry has played the vital role in this area.

Table No. 14

Indirect Income form Forest Products

Source	Consumption Unit	Market Price	Total Price (RS.)
Fuel wood (in Bhari)	226	Rs 40/30 Kg	9040 (19.01%)
Fodder (in Bhari)	339	RS 20	6780 (14.26%)
Timber (in cubic feet)	705	Rs 45	31725 (66.73%)
Total			47545 (100%)

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Community forestry has provided similar as Rs. 47545 benefit to the local users last year. In which fuel wood, fodder and timber contributed the advantage of 19%, 14% and 66% respectively. People were provided 3000 cu. ft. cubic feet timber last year, which accounts for Rs 12,00,000.00. Timber products play most significant role rather than fodder and fuel wood. People saved Rs. 904 from the fuel wood, which has been spent to fulfill their need of fuel wood. Fuel wood is distributed from CF according to the family size with nominal charges of Rs 20 per *Bhari*. Kankali CF is opened in the winter season for dry fodder, in summer; green grasses are used mainly to feed livestock. CF could not provide the all demand of fodder and green grass, so they have been using their farmland too.

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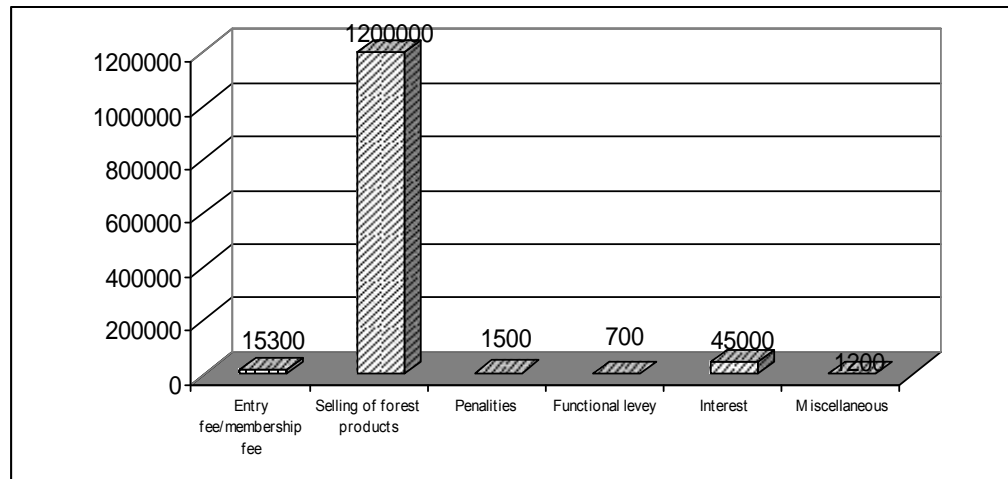
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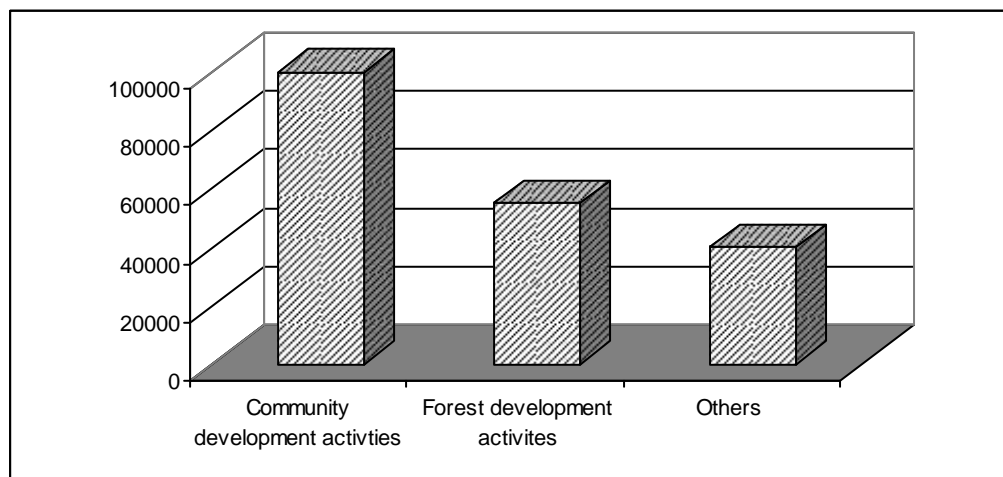
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After CDA, forest development activity has been given second priority. The overall expenditure in official works covered only a small amount of fund.

CHAPTER V

COMMUNITY FORESTRY USER GROUPS ACTIVITIES

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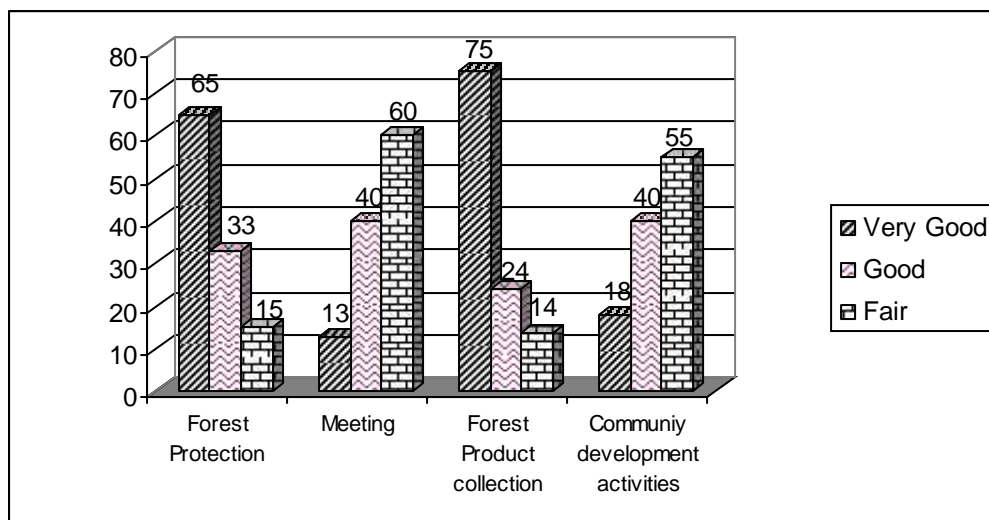
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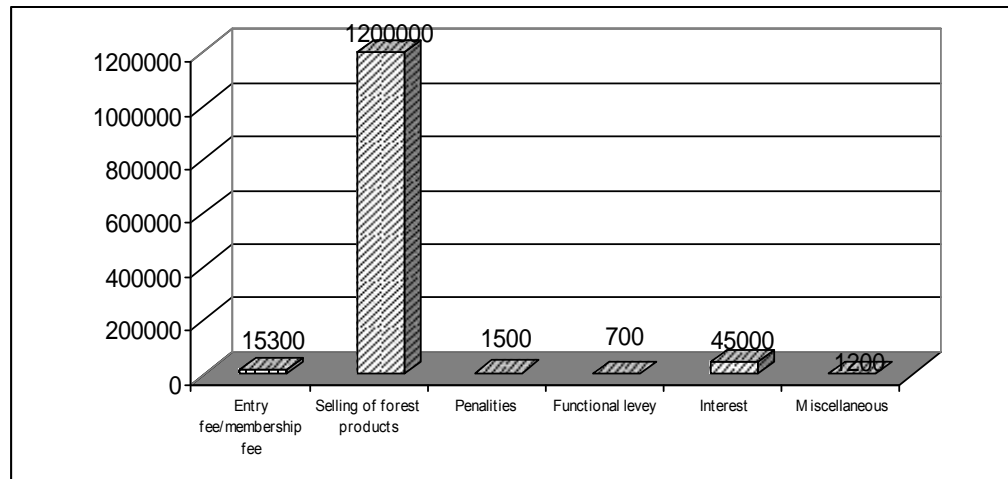
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Sources of Income



It can be seen from the above figure at the major source of income (84%) is from the selling of forest products (timber, non timber) CFUG have earned from the second significant amount of money (10.88%) from the interest of the amount deposited in bank and local people.

The Kankali CFUG generated 4.23% of total income from entry fees, penalties and functional levy. Local people have to pay 5,000 to a user member of CF. It is the big amount for poor people.

5.6.2 Areas of Expenditure

Mobilization of the fund in community development was major activity with 51.28% of spending. This is one of the highly demanded activity in the community as it is directly linked to the welfare of the community. Area of expenditure is shown on the below figure.

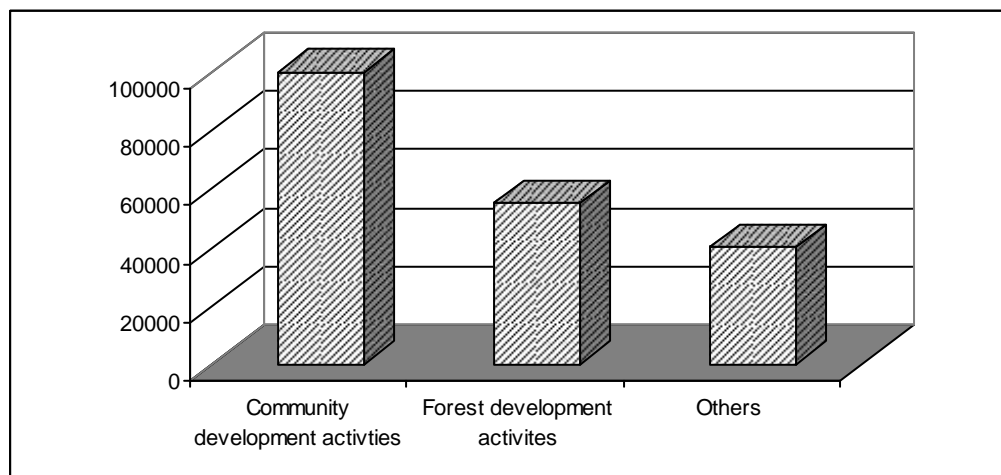
Forest development activity has covered the second major area of the investment in Kankali community forest user group, 28.2% of the fund was used for forest protection works. CFUG has used 15.38% of fund in plantation and nursery. CFUG has spent more than 50% fund to the community related activities such as school support (teacher salary and infrastructure) irrigation,

Health related activity road, construction and gravelling, capacity building (literacy, training, vegetable seeds, toilet and bridge). Some of the community development works were also carried out jointly with the financial support from RRN, However it was not clear that how much external fund has been used. 15% fund was spent organizational development related to stationary such as stationary furniture, tea/snacks, auditing. Some people are hired (within the FUG) to carry out plantation and harvesting effectively and systematically. It is shown that the involvement of hired labour for carrying out silvicultural operations involved some amount of expenditure of funds. They are not well trained and not efficient to conduct the forest management operations.

Through fund generation and its mobilization is the ultimate goal of CFUG to improve their livelihood. The below figure has shown the comparison of fund used between forest development activities and community development activities.

Figure No. 7

Utilization of Fund Compression between FDA and CDA



While comparing the allocation of the fund, it is also found that the CFUG of Kankali community forest has spent much of their fund in community development activities.

After CDA, forest development activity has been given second priority. The overall expenditure in official works covered only a small amount of fund.

CHAPTER VI

BENEFITS DERIVED FROM THE COMMUNITY FORESTRY AND ITS PROBLEMS

6.1 Benefits Derived by Users from Community Forestry

Secondary benefits of forest management (like the construction of school buildings, employing teacher or construction of rural infrastructure like roads or drinking water, irrigation schemes) are very substantial and crucial in the rural context. Generating these benefits, CFUG is increasingly assuming the stewardship for local development, which are conventionally the state functions.

Because of the high demand for forest products in densely populated central Terai region, the forest here is far more degraded and form being unproductive compared to the other zones. So community forestry is like an investment to restore the degraded forest. It provides the local people with a management system which offers suitable and efficient forest protection and utilization patterns. It does not provide immediate benefits but its influence is felt a few year after operation.

Forestry is mainly a social service. Therefore, it is not possible to access its projects purely on the basis of commercial benefit-cost analysis. Its benefits and costs must take into account the various relevant factors which affect national welfare, environment, resources and security. Human welfare depends up on air, soil and water management, in which factors play vital role.

Their diverse contributions include several abstruse beneficial influences viz, pollution control, temperature control, retardation of the flow of heat into the ground during the day and exudation during the night, interception of rain water and its infiltration, water and soil conservation, role of trees shelterbelts and wind breaks, capability, role of trees to fix atmospheric nitrogen leading to the production of nitrogen, fertilizers, recreational and amenity values, scientific and educational valued, military defense tribal and village welfare, and so forth. Forestry projects are motivated

to provide environmental and ecological stability, improve social condition, ameliorate the economy as well as lead to more equitable distribution of income. Forest economics helps to evolve new criteria for the assessment of various aspects of forest role to provide factors at present beyond the scope of traditional benefits-cost analysis. Community forest provides various benefits in various sectors some of the benefit derived by Kankali CFUG are categorized in the following topics.

6.1.1 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 Kankali community forestry are as follows:

Strengthening Organization

Mechanism for encouraging and forming user group committee, thus building up the social capacity for rural development. After the establishment of the Kankali CF, people are united to tackle every types 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 No. 15

Kankali CFUG's Organization

	Female	Male	Total
General assembly	-	-	113
User's group	4	7	11
Executive committee	1	4	5

Source: Field Survey, Sept., 2009.

Employment Generation and Poverty Reduction

Through the Kankali 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.

Co-operation among People

The sustainable supply of forest product (firewood, fodder, timber etc.) help 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.

6.1.2 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 community forest has provided the significant economic benefits to the users. Some of the economic benefits derived by the Kankali CF user groups are as follows:

Availability of Forest Products:

Kankali 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.

Sustainable Collection

It is found that FUG in Kankali community forest have been able to protect, manage and utilize the forest resources sustainability. Such as CFUG harvests timber, fuel wood and fodder generating economy. Afforestation, 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.

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 2061. Expectations are limited only in the constitution of the Kankali CF.

6.1.3 Environmental Benefits

Some of the major environmental benefits of community forestry are: it controlled the soil erosion and provided the bio-fertilizers to the farm productivity increased, compared before. This forest influenced local climate. Kankali CF provided habitat to wildlife such as, wild cock, wild pig, monkeys and various kind of birds. It was found by survey that, most of the local people would walk in the morning and evening in CF for enjoyment, recreation and mental peace.

It absorbs the various types of air pollution and rains into this area so that local people are not so unhealthy.

6.1.4 Improvement in Agriculture

The farmers considered the forest as an integrated part of the farming system. People of the community have used, improved variety of seeds for agriculture after the introduced of DF. Along with forestry activities, discussion regarding improved seeds of the forest trees and crops with their relation to production has been usually discussed in the FCG forums. These interactions increased their perception and awareness among the villagers. The remaining households have the knowledge of the improved variety of seeds but still use the traditional belief. Less than 50 percent respondents used bio-fertilizer, and most of them use chemical fertilizer on their farm land. Some of the farmers said that if the trend continues for long, the soil may become unproductive for cultivation and also they believed that the use of compost enhances soil fertility.

Tree leaves are used as fodder to animals green and dried leaves are used as bedding material in animal stall. Dried leaves and dung are mixed to

make the organic compost. Which is main fertilizer used in farming. Firewood is used for cooking and heating. Timber for plough and other agricultural equipments and non-timber-bamboo, stem fodder and masala are provided by Kanklali CF to the users.

6.2 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:

6.2.1 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 silvicultural operations. The product fuel wood is distributed equally, along with the 10 rupees charge, to each of the households. In addition, user can collect dry twinges and branches from the forest at the Paus and Magh months of the year free of charge.

6.2.2 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. 20 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.

6.2.3 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.

6.2.4 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 collected from such punishment is added into the fund of user group.

6.3 Availability of Forest Product

Availability of forest products are significant to provide the requirements of forest to the local people. Many community forestry users are gained the available forest products by the community forestry. It determines the economic status of local people. Some users have used the forest products only subsistence used and some of them used these for selling which is shown below the table.

Table No. 16

Availability of Forest Product

Products	Selling Household		Buying Households	
	Number	Percent	Number	Percent
Timber/pole	14	12.38	25	22.12
Fuel wood	5	4.42	70	61.95
Fodder	3	2.65	26	23.00
Leaf litter				

Source: Field Survey, Sept., 2009.

Fewest number of the households neither sell nor buy the forest products like timber pole, fuel wood and fodder. Nearly 19 percent households sell the forest products and majority of the households buy the forest products from the CFUG and commercial seller. About 12 percent local users sell timber pole which is gained by CF. More than fifty percent households have to

buy firewood for their daily use from the CF and other firewood seller. It can be seen from the above table that, there is not equitable sharing of benefits from the community forestry. Some of the users are having made a profit but some of them are deprived to take the advantage. So the role of the CFUG is weak in the context of distributing the forest products.

6.4 Problems of Community Forestry 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. Similarly, in community forestry conflicts are also seen within forest user group, between users and district forest office.

In Kankali community forestry, conflict arised 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 can not 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 problems of Kankali community forestry. Other problems of community forestry are technical. They can solved by external assistance.

6.4.1 Technical Know-how

There is not any program of community forestry development. So this area is neglected by NGOs and INGOs for the development of community forestry. CFUG faced the more difficulties to convert the theoretical knowledge into practical field, due to the more administrative role of DFO than technical. Very few members are trained. Many local people as well as CFUG members don't know about the technical aspect of forestry. How to make plan, how to plant the tree properly, how can gain more benefits by CF are rare in the mind of various users. It is found by the survey, only few members of CFUG know about community forestry.

6.4.2 Sampling

Although sampling is provided to the community forest user group, its proper management and protection is securing some problem. The Kankali community forest is not matured too enough to generate by itself. Technical, administrative and management knowledge are required for the sustainable community forestry development.

6.4.3 Illegal Falling of Trees

Illegal feeling of trees occur sometimes in the Kankali community forestry nearly 15% of the respondents reported that it is a big problem but the majority of them said that is not a big problem and has occurred of few times.

Table No. 17

Problem of Kankali Community Forest

Problems	No. of Respondents	Percent
Conflict	30	26.55
Illegal cutting, hunting and poaching	22	19.47
Lack of technical knowledge	17	15.04
Monitoring and evaluation	15	12.27
Unequal distribution of forest product	5	4.43
Lack of loan distribution	14	12.39
No problem	10	8.85
Total	113	100

Source: Field Survey, Sept., 2009.

Out of 30 households, 133 respondents from the household have reported about main problem of conflict. 26.55% of the problems are occurred

by the conflicts. The majority of the problems are crusting by the illegal cutting, hunting and poaching, lack of technical knowledge monitoring and evaluation, lack of land distraction etc. A few (4.43%) respondents reported that the unequal distribution of forest product is a problem. Lack of monitoring and evaluation are problems for community development. Only 8% respondents stated that there is not so significant problem.

6.4.4 Effectiveness of CFUG

The effectiveness of CFUG 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 No. 18
Perception of the Users

Description	No. of Respondents	Percent
Very good	20	17.70
Good	30	26.55
Fair	16	14.16
Satisfactory	47	41.59
Total	113	100

Source: Field Survey, Sept., 2009.

Majority of the respondents (41.59%) are not satisfied with the work of CFUG. Only limited number of the respondents (17.7%) supported to the CFUG function. And rest of them are neither satisfied nor unsatisfied. So, according to the majority of the respondents there are still existing some problems. Which should be solve 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 - VII

SUMMARY, CONCLUSION AND RECOMMENDATION

This study is carried out in Kankali community forestry area of Chainpur VDC, Ward No. 8 of Chitwan district. This study has emphasized the economic activities of community forestry related to community development activities and forestry development activities in this area.

7.1 Summary

Twenty five years of community forest management witnesses tremendous shifts in forest policies and procedures in Nepal. This run parallel with the changing objectives of forest management from subsistence to sustainable economic transforms. The community forestry approach has been highly successful the protection of forests. The local user group/committee are responsible for the control, protection and management of the forests. Community forestry advocates strong community participation, bottom up planning and sustainable use of forest resources. In this study area, pro-poor activities on the livelihood have been positive but the constitution and operational plans of CF low emphasized to involvement of the poor, women and *Dalit* in CF. Comparatively high economic status people are being user in Kankali community forestry.

The CFUG fund management has been increasingly focused on community development (51%) and poverty reduction activities. Some households may suffer losses due to no access or restricted grazing under CF while others may gain from increased availability of forest products.

It is found that the trend of forest degradation has decreased since handing over of national forest to local communities, but some number of unintended social anomalies have also cropped up. The executive committee makes most of the decisions on behalf of users and committee members are not accountable for those decisions. The poor rarely voice their arguments in their favour to extract products for meeting their livelihood. Poor and disadvantaged groups suffer the most in this type of sharing mechanisms.

Most preferred silvicultural prescription in forest type is pruning, followed by cleaning and thinning. Although some progress has been achieved from the CF, it is often criticized for lack of positive livelihood benefits to local poor. Community forestry development fund is spent on activities such as graveling roads, supporting schools, making bridge and irrigation channel. Some of the poor families can't readily benefit from these activities. No specific programs have been developed by any agency, INGO, NGO, to enhance the livelihood of the poor and disadvantaged groups. Due to the lack of forestry technician, this community forest is facing difficulties for managing community forestry.

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. The participation of women, *Dalit* and poor in community forestry management is poor or low.

Forest provided a variety of goods and services to the local users of Kankali community forestry. The main products are fuel wood, fodder, timber and some medicinal goods. Some local people are advantaged by agricultural equipments and household articles which are provided by the community forest.

The CFUG has been generating income from selling of forest products, penalties entry fees, etc. and collected fund is allocated to the community development and forest development. People of community have used, improved variety of seeds for agriculture after the introduced of CF. Community forestry is a source of inspiration and vehicle for change at the village.

7.2 Conclusion

Community forestry stands as one of the most successful participatory development initiative in Kankali community forestry with the intertwined goal of conservation and livelihood support. But proper contribution of community forest in various aspects are not provided with equitable to all local users. Paradigm shift from basic needs fulfillment as a way of sustenance to sustainable management demands redefinition of management processes in

the coming days. Kankali community forest user group provides an environment to practice and learn from community forestry and much has been achieved in terms of capital formation and its flow, however, there are many challenges related to gender and equity, livelihood and forest sustainability.

Majority of local people are Brahmin and Chhetri ethnic groups (65%). The number of *Dalit* and *Janajati* ethnic groups are fewer than high caste ethnic groups. Almost 24 percent occupation is based on agricultural activities of farming and animal husbandry. Besides these people work as wage labourer, shopkeeper and traditional profession. 17 Percent head of the households are illiterate, and 7 percent have finished the higher education. Most of the land are at the hand of upper class of families. Nearly 3 percent people are landless, they are trapped by the vicious circle of poverty. 34 percent local households don't have sufficient food for subsistence life. So that, most of the people's economic condition is vulnerable.

Community forestry in this area is now, the main source of fuel wood, fodder for livestock and timber for villagers. It is also the source to help community development programme such as gaveling road, bridge construction, electricity, trail improvement, school support and irrigation canals.

Villagers are now getting sustainable forest products, easy accessibility, cooperation among people and environment.

Access and involvement of the poor in the management and utilization of community forest and an equitable sharing of the benefits are the major challenges of community forestry. It has been experienced that the local elites tend to make most decisions and capture most of the benefits generated from community forestry.

The, Kankali community forestry fund has been generated but benefits are not being shared in an equitable manner.

Conflict among the users, Maoist, Bhutani refugees depend on forest and different political ideologies of people, lack of the technology and

technician of forest, untrained and uneducated people are the various core problems in community forestry development.

In conclusion, community forestry can contribute to improve the subsistence level of local people or poor, but it alone can't improve the livelihoods of poor local users.

7.3 Recommendations

Community forestry program is the only one effective programme in the Central Terai of Nepal. Which has gained success to check the rate of deforestation. It has played a very essential role to fulfill the villagers forest based basic needs to maintain the ecosystem. On the basis of findings of the study, here are some recommendation for the effective exploitation of community forestry.

- (i) CFUG's operational plan are not focusing on sustainable forest management and also do not contain a holistic approach for community development. Therefore the operational plan should be revised by focusing on the linkages of CF with other sector of community development.
- (ii) A policy guideline for the use of the funds should be developed for the proper mobilization of group's fund. The guideline should address the concerns about the integration of CF in to the stream of community development as well as other welfare oriented programmes.
- (iii) More effort is needed to encourage the poor to access the available resources and encourage them to come forward.
- (iv) CFUG fund should be managed as revolving fund with planning for regular cash flow and capital gain.
- (v) CFUG should provide the opportunities to poor, women and *Dalit* people for growing their empowerment in society and community forestry.
- (vi) CFUG have to be provided with the technology of NTFPs cultivation and promotion in community forest. For this, demonstrative plots should be established at the district level and training on NTFPs

management should be given to the users as well as to the middle level technicians.

- (vii) FUGs need to be supported and strengthened in institutional development aspect through different types of exposures such as field trips, training and workshops related to decision making, fund management and overall group empowerment and capacity building.
- (viii) The role of CFUGs in improving the welfare of rural communities needs to be known and supported for achieving the success in this direction, all users should be involved in the CF management process. In Kankali CFUG, users should be sensitized through awareness raising programme related to CF for the improvement of users from different background.
- (ix) FUGs having similar objectives, attitudes, natural resources can be organized into an association or a network. Networking helps CFUG to start many forest based industries and implement CDAs. Therefore, emphasis should be given to form new or to improve the existing networks of CFUG, having similar needs and socio-cultural settings. Development of networking and association of CFUG and the other stakeholders (VDC, DDC, INGOs and DFO) is recommended.

APPENDIX - I

Questionnaire

Economic Effect of Community Forestry: A Case Study of Kankali Community Forest User Group of Chainpur VDC of Chitwan District

Name: _____ Date: _____

Address: _____

Personal Background:

Age: _____ Sex: _____

Ethnic Group: _____

Family Number: _____ Male: _____ Female: _____

1. Education

(a) Illiterate (b) Literate

(c) Secondary education (d) Higher education

2. What is your profession?

(a) Agriculture (b) Service

(c) Work labour (d) Traditional profession

(e) Others

3. What is your income status?

(a) Lack of subsistence (b) Only subsistence

(c) Saved after feeding

4. What are your facilities in your home?

(a) Toilet (b) Bathroom

(c) Radio (d) TV Computer/telephone

5. What is the source of energy in your house for cooking?

(a) Biogas (b) Kerosene

(c) Gas (d) Fuel wood

6. Do your CF able to meet daily needs of following forest products?
- | | | | | | |
|-----|-------------|--------------------------|-----|----|--------------------------|
| (a) | Fuel wood | <input type="checkbox"/> | Yes | No | <input type="checkbox"/> |
| (b) | Grass | <input type="checkbox"/> | Yes | No | <input type="checkbox"/> |
| (c) | Leaf litter | <input type="checkbox"/> | Yes | No | <input type="checkbox"/> |
| (d) | Timber | <input type="checkbox"/> | Yes | No | <input type="checkbox"/> |

7. Who goes to CF development Program from your family?

Name of worker

- | | | |
|-----|------------|-------|
| (a) | Fuel wood | ..... |
| (b) | Grass | ..... |
| (c) | Meeting | ..... |
| (d) | Plantation | ..... |
| (e) | Protection | ..... |

None goes

8. How many livestock's do you have?

No.

- | | | |
|-----|---------|-------|
| (a) | Cow | ..... |
| (b) | Buffalo | ..... |
| (c) | Goat | ..... |
| (d) | Pig | ..... |
| (e) | Chicken | ..... |
| (f) | Duck | ..... |

9. Have you used timber recently?

- | | | | | | |
|-----|-----|--------------------------|-----|----|--------------------------|
| (a) | Yes | <input type="checkbox"/> | (b) | No | <input type="checkbox"/> |
|-----|-----|--------------------------|-----|----|--------------------------|

If yes, for why?

- (a) Home construction
- (b) Furniture
- (c) Animal shed construction
- (d) Tools
10. From where do you get timber?
- (a) Government forest
- (b) Community forest
- (c) Private forest
- (d) Market
11. What are the changes you have witnessed after the introduced of community forestry programme?
- (a) Increased of forest area
- (b) Proper use of resources
- (c) Effective reservation of forest
- (d) Promotion of livelihood
12. How does it helped to reduce the poverty on your opinion?
- (a) Provide loan to the poor
- (b) Provide skill oriented training
- (c) Provide educational opportunities
13. How has CF programme helped people in generating activities besides forest products?
- (a) Introducing modern seeds and fertilizer to farmers
- (b) Giving training
- (c) Provide loan to the user
14. Have you realized any problems in CF programme?
- Yes No
- If yes, how?

- (a) Conflict
 - (b) Illegal cutting of timber
 - (c) Unequal distribution of forest product
 - (d) Fire and grazing
 - (e) Others
15. How much do you satisfy the activities of CF role?
- (a) Best
 - (b) Better
 - (c) Good
16. How much do you have farm land in Kattha?

17. What did people get after the introduced of CF, in your opinion?

18. Do you agree with the recent committee? If no, why, give reason.

19. What are the core problems for the development of CF management?
 In your opinion.

20. In your opinion CF is
- (a) Very beneficial
 - (b) Good
 - (c) Not very important
 - (d) Not good

21. What is your recommendation to improve the development of the community forestry?

.....

Expenditure area of CFUG

Particular	Income in Year (Rs.)					Total	Percent
	2057	2058	2059	2060	2061		

What types of goods and service are provided to the users?

	Free	With cost
(1)
(2)
(3)
(4)
(5)
(6)
(7)

.....

Fund Mobilization area

- (1)
- (2)
- (3)
- (4)
- (5)
- (6)

.....

Community development activities

- (1)
- (2)
- (3)
- (4)
- (5)

Problems

S.No.	Particular	Problem
1.	Forest related	
2.	User group related	
3.	Users related	
4.	Community development related	
5.	Social	
6.	Economic	
7.	Other	

What is being changed after handover the forest to Kankali CF user group

S.No.	Particular	Before CF	After CF
1.	Forest area		
2.	Forest protection		
3.	Community development		
4.	Poverty reduction		

What may be recommendation?

.....

APPENDIX - II

Photo Plates



Timber is Unloading



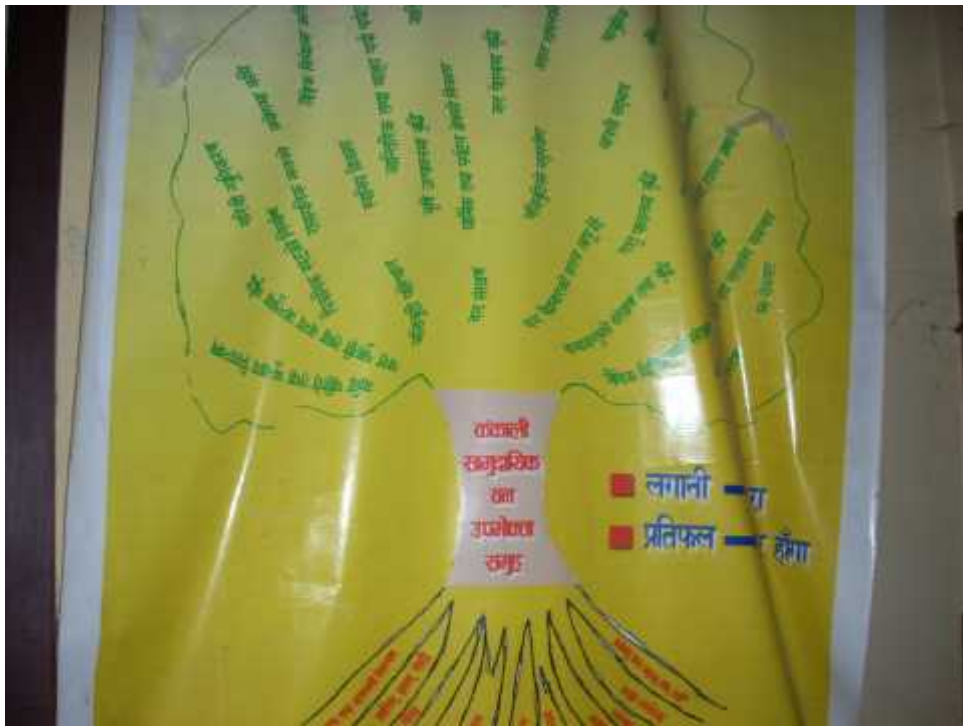
Building of the Kankali Community Forestry



Manager of the Office

कंकाली सा. व. उ.संग्रहको चौथो अधिवेशन २०६४ बाट निर्वाचित कार्यसमितिका पदाधिकारीहरूको नामावली -		
अध्यक्ष	श्री रविन्दनाथ अधिकारी	
उपाध्यक्ष	श्री बुद्धि माया मोक्तान	
सचिव	श्री जित बहादुर भट्टराई	
कोषाध्यक्ष	श्री दिल बहादुर वि. क.	
सदस्य	श्री चन्द्र कुमारी गुरूडु	-- ५
॥-	श्री शारदा मण्डारी	-- ८
॥-	श्री कमला ढुंगाना	-- ७
॥-	श्री कुमारी धिमिडु	-- ६
॥-	श्री विष्णु माषी न्यौपाने	-- ५
॥-	श्री भरत बहादुर मण्डारी	-- ८
॥-	श्री नारायण प्रसाद स्वनाल	-- ७
॥-	श्री आस माया गुरूडु	-- ६
॥-	श्री रूद्र बहादुर कार्की	-- ५
॥-	श्री मोहन राज खरेल	-- ४
॥-	श्री टिका दत्त ईटनी	-- ३

Membership of the Board



Symbol of the Community Forestry



Timber Collective Area



Computer in the Office Room



Community Forest Area

REFERENCES

- Acharya, K.P. (2002). "Twenty Four Years of Community Forestry in Nepal." *Common Wealth of Forestry Association*. Kathmandu: Forestry Department.
- Anonymous (1991). *Community Forestry in Nepal*. Kathmandu: Community and Private Forestry Division, Department of Forest.
- Bajracharya, D. (1983). "Historical and Political Perspective from Nepal." *Deforestation in the Food/Fuel Context*. Kathmandu: Mountain Research Development.
- Baral, N.R. (2003). "Where is our Community Forestry?." *Banko Jankari. A Journal of Forestry Information in Nepal*. Kathmandu: Forestry Department.
- Baral, N.R. (1998). *Integrating Forestry Land Allocation for Poor People*. Kathmandu Livelihood Forestry Programme (LFP).
- Britt, D. Charla (2002). *Changing the Boundaries of Forest Politics*. Kathmandu Community Forestry, Social Mobilization and Federation, Building in Nepal.
- CFD (2004). *National Database*. Kathmandu: Community Forestry Division, Department of Forest.
- Dangol, C.M. (2002). *The Role of Capital Formation in Contributing to Sustainable Community Forestry in Nepal*. an Unpublished Dissertation, Central Department of Economics, T.U., Kirtipur.
- DDPN (2002). *District Development Profile of Nepal*. Kathmandu Ministry of Forestry.
- DFRS (1999). *Forest Resources of Nepal*. Kathmandu: Ministry of Forest and Soil Conservation.
- Dhimal, Mahendra (2004). "Environmental Importance of Forest Resources." *Hamro Kalpbriksha*. Kathmandu: Forestry Department, Planning and Monitoring Section.

- FRISP (1999). *Forest Resources of Nepal*. Kathmandu: Forest Resources Information System Project, Ministry of Forest Soil Conservation.
- Gilmour, D. & Fisher J. (1991). "The Process and Practice of Community Forest in Nepal." *Villagers Forest and Foresters*. Kathmandu: Shayogi Press.
- Graner E. (1997). *The Political Ecology of Community Forestry in Nepal*. Delhi: Town Press.
- Giri, Kalpana (2005). "Changing Dimensions of Community Forestry in Nepal." *The Journal of Forestry*. Kathmandu: Nepal Forestry Association.
- Gyawali D. & Kopphen, J. (2004). *Missionary Zeal on Retreat*. Bara: The Strange Ephemerability of Bara Forest Management Plan.
- HMG (2002). *The Tenth Plan*. Kathmandu: National Planning Commission, HMG/N.
- Hobley, M. (1996). *Participatory Forestry*. London: The Process of Change in India and Nepal Overseas Development Institution.
- Hunt S.M. (1996). *Income Generation through Community Forestry*. Bangkok: A Proceeding of Seminar.
- JTRC (2001). *Joint Technical Review of Community Based Forest Resource Management*. Kathmandu: Ministry of Forest and Soil Conservation.
- Kandel, B.R. & Subedi R. (2004). "Twenty Five Years of Community Forestry." *Pro-poor Community Forestry*. Kathmandu Community Forestry Division, Department of Community Forestry.
- Kandel K.R. & Niraula D.R. (2004). "Can Rural Livelihood in Nepal through Community Forestry?" *Banko Jankari*. Kathmandu: Community Forestry Association.
- Khadka M. & Shrestha M. (2004). "Twenty Five Years of Community." *Fund Mobilization in Community Forestry*. Kathmandu: Forestry Department.

- Lamichhane D. (2004). "Decision Making Role of Women in Community Forestry. *Hamro Kalphrikhsa*. Kathmandu: Forestry Department.
- Lekhak, D.B. (2003). *Natural Resource Conservation and Sustainable Development in Nepal*. Kirtipur: Kshitiz Publication.
- LFP (2003). *Features of LFP's Work with the Poor*. Kathmandu: Livelihood and Forestry.
- LIBIRD (2003). *Animation Programme Review*. Kathmandu: Livelihood and Forestry Programme.
- Mahat B.S. (1998). *Community Forestry Development in Nepal*. Kathmandu: Biswo Press.
- MFSC (2002). *Nepal Biodiversity Strategy*. Kathmandu: Ministry of Forest and Soil Conservation. HMG/N.
- MPFS (1998). *Master Plan for the Forestry Sector of Nepal*. Kathmandu: Ministry of Forest and Soil Conservation.
- Nurse M. & Paudel D. (2003). *Rural Entrepreneur Development of Nepal*. Kathmandu: Swiss Community Forestry Project.
- Ojha, A.R. (2004). *Sustainable Rural Development*. Unpublished Handout of R.D., T.U., Kirtipur.
- Ojha P.R. & Subedi K.N. (2004). "Livelihood Forest Project in Dhaulagiri Hill." *Community Forestry and Safer Motherhoods*. Kathmandu: Ministry of Forest and Soil Conservation.
- Paudel A.S. & Thapa R.B. (2004). "Twenty Five Years of Community Forest." *Community Forestry for Poverty Reduction*. Kathmandu: Community Forest Division, Department of Forestry.
- Paudyal Badri (2003). "Hario Ban Nepal Ko Dhan." *Nepal Times*. August 15-121.
- Pokharel B. (2004). *Community Forest Based Governance and Livelihood*. Kathmandu: Nepal Swiss Community Forest Project.
- Pokharel B.K. & Upadhaya S. (2001). *Seven Years of Dhaulagiri Hill*. Kathmandu: Nepal UK Community Forestry Project.

- Pokharel B.K. & Tumbahamphe N. (1999). *Community Development Action Plan*. Kathmandu: A Synthesis Report and Publication.
- Shahi B.B. (2000). *Sustainable Community Forest Management in the Mid Hills of Nepal*. An unpublished Case Study from Kaski and Tanahu District, Kathmandu: Central Department of Sociology/Anthropology, T.U., Kirtipur.
- Sharma, S.K. & Subedi L.P. (2003). *Review of Small Infrastructure Support Programme*. Kathmandu: Livelihood and Forestry Programme.
- Shrestha, Mngala (2004). "Gender Issues in Community Forestry in Nepal." *Nepalese Journal of Development and Rural Studies*. Kirtipur: Central Department of Rural Development, T.U.
- Sing B.K. (1998). "Community Forestry in Nepal." *Banko Jankari*. Kathmandu: Forestry Department.
- Subedi B.P. (1999). *Non Timber Forest Products Sub Sector in Nepal*. A paper presented in NTFPs Management Workshop at National, India, Delhi.
- TFYCF (2004). *Twenty Five Years of Community Forestry*. Kathmandu: Community Forestry Department, Ministry of Forestry and Soil Conservation.