CHAPTER – I : INTRODUCTION

1.1. Background of the Study

After the restoration of democracy in Nepal in 1990, the concept of community forestry has been one of the most famous examples of decentralization. Some new rules and regulations have been managed after the democracy. The forest act (1993) and the forest regulation (1995) have provided the legal basis for the implementation of community forestry and recognized community forest users groups as self governing autonomous corporate bodies for managing and using community forests according to community operational plan.

Community forestry is helping to uplift the socio-economic condition of he rural areas like Ugratara. Community forestry is involving in developing sectors like road construction, help to the school, scholarship management, blood donation, temple renovation etc. Likewise utensils buying for the programs like wedding ceremony, party, drinking water supply etc are also being conducted. Income generation sectors like herbs cultivation, bamboo, amriso, nigalo, daleghans, etc plantation, bamboo art (baskets, etc) are some remarkable work of the community forestry. A community forest may be modal community forest if it has conducted programs like mentioned above.

Community Forest Program was officially started in late 1970s in Nepal. All kinds of forest activities were run by the government before community forest program. Forest areas were nationalized in 1957 A.D. Rural people were prohibited to use the forest production. There were strict rules, regulations and punishment systems to the miss-users of the forest. Rules, regulations and strict punishment systems could not stop forest degradation and wildlife trafficking. Therefore government planners and Scholars became compelled to think about alternative management of the Forest. A 21 years long master plan was made in

1989 (2045 B.S), which gave the first priority to the Community forest. As a result "Sanu Ban Pande Goun" which lies in Ugrachandi V.D.C. Ward No.1, Tukkucha Nala of Kavre district was legally handed over in 2045 Asar 28th to the community. It is said as the first Community forest in Nepal. In the same year Community forest user group (CFUG) executive committee was formed in Dhankuta district. Thus Community forest laid the foundation stone in the history of forest in Nepal. After the provision of the community forests, many rural communities have been involving in the utilization and management of forest. We have very famous proverbs like 'Hariyo Ban Nepalko Dhan' (forest is the wealth of Nepal). It has been practically proved- 'Jaha Jungle, Tyaha Mangal'.

Community forest was expanded to include the mobilization and empowerment of the community forest users groups. Community forest is playing vital role to stop forest degradation. It is supporting rural people such as livelihood and social justice, good governance and active forest biodiversity management. It is supporting for poverty alleviation and environmental protection as well. As a result 1,229,669 hector of total area is handed over to the local communities till now. All 75 districts of Nepal are with community forest operations. Altogether 1,659,775 numbers of households are directly benefited from community forest. Total number of Community Forest Users Group in Nepal is 14,439 till now. Likewise, over 35% of the total population of the country is benefited from the community forest.

Table 1.1

Community Forestry National Profile

Total area of the Community Forests handed over	1,229,669 ha
Total Number of CFUGs	14,439
Total Number of HHs involved	1,659,775
% of total population benefited	35.4%
Average number of Committee members	11.82
Average size of Community Forest User Group	111.6HH
Average number of women in Committee	2.59
% of women in the committee	21.9
Number of women only CFUGs	556

Source: CFD Office,2004

With the invention of Community forestry, local villagers have demonstrated their ability to generate poverty reduction practices. Providing soft loan to the poor for income generating activities such as knitting cloth from Allo plant is an example for the initiatives taken at the local level. Similarly, some of CFUGs are establishing and operating NTFP enterprises to provide local employment and value addition. But such innovations have not yet been expanded to have national level impacts. Broader access to the forest resources at community level has definitely contributed to the improvement of livelihoods though such impacts have not been critically assessed. Focus needs to be given to identify, demonstrate and replicate such practices in other communities as well.

In community forest, Government delegates the responsibility of managing government forests and the right to use the forest products in a sustainable way and with the ultimate policy objective of improving livelihoods in rural community. Community forest users group in Ugratara is being directed from the above-mentioned statement and working as an active body of decentralization in the sector of forest.

Community forest is one of the successful joint production systems in the contest of Nepal. Community forests boost up the efficiency power in the participation. It has played a crucial role to fulfill the requirements of forest products of rural people.

AS a sub-sectored Program of the tenth plan, community forestry aims to promote employment and income generation opportunities to poor and disadvantage families. It further promotes non-timber forest management. Managing community forest and focusing on non-timber forest products not only increased the income of CFUG but also generates employment for its users.

1.2. Statement of the Problem

In Ugratara VDC, there are 6 community forests; they are Balkumari, Bhagawan Thumki, Dhaneshowri, Jwaladevi Sharadadevi, Kalika Ban and Perunge Ban. CF is helping in the various sectors of capacity enlistment like accountancy training, planning implementation, CF introductory training and proposal writing for the user groups the community members of Ugratara. Users

are involved in monitoring and evaluation of the local forest by themselves. People are excited to protect and utilize the forest. As a result, we can see beautiful and green scenes around Ugratara area. Though there are many problems in community forest, it is helpful for the landless households in economic supports through the business of herbal plants and timber from forest.

All the people are not educated in Ugratara; most of them have no ideas about advantages of community forest. Some major problems in this area are misuse of forest products by the traffickers, grazing the cattle in the CF areas, lack of awareness etc. There are traditional types of plantation systems. Many programs are being conducted in Nepal through Government, NGOs, INGOs but it is found that there is lack of Non-timber forest products. Local people can earn money through NTFP. Medicinal and Aromatic Plants (MAP) are also not being planted and preserved. The system of M3 (Money, Men power and Material) is not properly managed. Encroachment is another problem seen in this area.

1.3. Objectives of the Study

The general objective of this study is to assess the overall impact of Balkumari Community Forest of Ugratara VDC of Kavrepalanchowk District. The specific objectives are as follows.

- To understand the socio-economic aspect of Balkumari community forest.
- To find out the major problems of Balkumari Community Forest.
- To know the existing forest development, utilization and distribution practices of Balkumari Community Forest.
- To recommend some possible measures for the betterment of Balkumari Community Forest.

1.4. Limitations of the Study

Each and every research work has its own limitations and this study is not exception. The limitations are pointed below.

- There are so many aspects of community forest, but this study has tried to evaluate the socio-economic impacts of CFUG in the study area.

- This study is related with small part of community forestry, so it may not truly reflect the actual situation of Kavre District.
- There are altogether 6 CFs in Ugratara however this study focuses only on Balkumari Community Forest of Ward No. 1 & 6.
- The study has covered the certain aspects of the socio-economic condition of the people.
- Due to the lack of time the size of sample households is small.

CHAPTER II : LITERATURE REVIEW

2.1. Conceptual Literature Review

The study on community forestry is not a new in the context of Nepal. Many government offices, NGOs, INGOs, Researchers and higher level students have under taken the study on community forestry in Nepal. There is plenty of literature available in the topic community forestry. Some important literature related to this study has been described below.

In 1950, the nation got political change and democracy came into existence. After seven years of democracy the private forest nationalization act 1957, brought all forest under government control. Trickle down policy was totally adopted. Because of this system people thought that 'forest is not ours" it is the property of the government, anyone can take advantage form it, so that deforestation took place heavily. State control of the forest failed largely because the institutional capacity to implement it did not exist nor indeed was the policy itself.

The forest act 1961 made provision for land to be made available for small private forest plots and introduced the idea of transferring government forest to village Panchayat for their use (Mahat, 1986). However no steps were taken to implement these provisions and the legal status of the forest was not addressed for a future 15 years. The forest privatization act 1967 was introduced to define forest offences and prescribe penalties. In fact, the implementation of the act seem to have been selective depending upon the social background and the influence of the offender (Gilmour and Fisher 1991) only the weaker section of the society was brought into the preview of the laws enforcement activity (Gilmour et al. 1991).

The Govt. approved the master plan for the forestry in April 1987. The master plan depicts the plan, policies and resources needs for investment to develop the forestry sector in the coming decade (1989-2010). The plan has

basically focused on the basic needs of the Nepalese people. The main goal of community forestry is to develop and manage forest resources through the active participation of communities to meet their basic needs. The strategy to activate this goal is handing over all accessible hill forest to the communities to the extent that they are able and willing to manage (MPFS, 1989).

In the community forestry management program in Nepal, The Nepal Australian Forestry Project (NAFP) is one of the innovators not only in implementing all programs but also in publishing materials on community forestry to date the NAFP began operating in Nepal on an informal basis in 1966 but started its program formally in Kavreplanchowk and Sindhupalchowk districts in 1978.

The forest department had been ignoring the forest in the hill regions and this has led to the deterioration of the water-sheds which are now in a very poor condition (NAFP, 1979) part of the remedy for this situation was to encourage the conservation of government land to “Panchayat Forest (PF)” with new plantation being raised by the panchayats. The rules and regulations were initiated which would govern to handling over the limited areas of government forest land to the control of panchayats.

Therefore, format recognition of the rights of villagers to manage their own forest resources with technical assistance is being provided by the format department (Gilmour and Fisher, 1991). Moreover, they have created a framework for the establishment of new forest to be managed by local communities, religious institutions and individuals (Gautam, 1987). The legal move towards the control of forest to be managed by local people was further strengthened by the provision of the decentralization act 1982 (Regmi, 1984). The community forest was passed to the users group as panchayat forest (PF) and Panchayat protected Forest (PPF). In fact, the national forestry act 1976/77 played a vital role in introducing and strengthening forestry and, the decentralization act 1982 became the next dimension for the development of community forestry.

The seventh five years plan [1985-1990] also started to fulfill the people’s daily needs of forest products and this was achieved partly by handing over the government forest to community. Conservation and management of forest

resources by the people themselves have been effective slowing or revering the process of deforestation in much area in Nepal.

The policy of the Nepalese Government on community forestry relates to the transfer of authority and responsibility for managing forest land form the government to village users, but they have not forest management and therefore have not done it. Although, they certainly have been exercising their own authority over much land that is legally under government control. (Molnar 1981, Messershmidt 1992)

Dahal (1994) stated that the main strategy of HMG a master plan was to promote people's participation in forest resource development and to develop community forestry user group as one of the important alternation for the forestry sector management in Nepal.

The foresters have professional and technical skills, and that the villagers have a realistic knowledge experience of local needs and hence community forestry combines them and encourages both understanding each other and working together (Malla 1987).

The policy of the government was originally intended to meet the basic requirements of the communities through the active participation of individuals and communities in forest development and management. (K.R. Kanel, CF Bulletin 2004)

Ingles and Gilmour (1989) presented a case study of Dhulikhel ko Tanloban and noted three types of users group in this community forest who were interested in different aspects of community participation such as plantation, prune, thinning etc.

Hobley (1990), in Ph.D. dissertation, argued that, although the objective of social forestry program in Nepal is to help women and the poor, the class and patriarchal structure women and the poor, the class and patriarchal structure limit their participation and access to and control over social forestry projects. She cited example from Tukkucha and Banskhara Panchayat of the NAFP project area.

The community forestry program focuses largely on the planting and protection of forest, and meeting rural people subsistence needs for fodder, fuel wood and timber (Manandhar 1980). It gives little consideration to the changing rural economy and has no provision for the supply of forest products to domestic

markets including local industries (Mallen 1993). However, community forestry has gained popularity even though it has some weakness.

Policies for forest management in Nepal were decided on the personal interest of the Rana rules until 1951. Government of Nepal there after formulated several policies and plans with regard to forest resource development and management (HD Lekhak, 2004)

Gerald Foley and Geoffray (1986) the multiple regression analysis based on tree cultivation and approaches to farm and community forestry was also noted.

Socio-economic condition of the targeted area plays a vital role for the success of development programs effective approach to community forestry management must be what actually works in Nepal. New strategies have the greatest chance of success if they are based on bio-physical possibilities as well as social economic realities. Therefore, technical and administrative feasibilities must be combined with socio-economic feasibility, if the forest and communities are to flourish (Campbell, shrestha and Euphrat 1987)

Jackson (1989) described the evolution of the process for reorienting forestry field staff in Nepal, so that community forestry program could run more effectively then before.

Community Forestry (CF) program in Nepal encompasses a set of policy and institutional innovations which empower local communities to manage forests for livelihoods, while also enhancing conservation benefits. The program was launched in the mid-1970s as part of an effort to curb the widely perceived crisis of Himalayan degradation, when the government of Nepal came to the conclusion that active involvement of local people in forest management was essential for forest conservation in the country. Nepal's Community Forestry innovations encompass well-defined legal and regulatory framework, participatory institutions, benefit sharing mechanisms, community-based forestry enterprises, and biodiversity conservation strategies. The program is considered a global innovation in the field of participatory environmental governance (Kumar 2002), and its history of implementation and program evolution usefully illustrate a path towards meeting the twin goals of conservation and poverty reduction (Pokharel et al 2007, Kanel and Acharya 2008).

Community Forestry is flourishing in Nepal, improving food security through enhanced household livelihoods in thousands of communities, and nurturing democracy at the grassroots despite a prolonged insurgency and political upheavals (Ojha and Pokharel 2005; BK et al 2009).

Three decades of operational innovations, legislative developments and evolving practice have clearly demonstrated success in terms of enhancing access to forest products, improving livelihoods opportunities for forest dependent people, strengthening local institutional capacity, and improving ecological conditions of forests (Dev et al. 2003; Ojha and Pokharel 2005; Subedi 2006; Pokharel et al 2007). Community Forestry appears to have stood the test of time, contributing to livelihoods and food security of the masses of rural poor in Nepal. By April 2009, about 1.6 million households or one-third of the country's population was part of Community Forestry, directly managing more than 1,000,000 ha, or over one-fourth of the country's forest area.

In light of these positive livelihoods and environmental outcomes, Community Forestry has been one of the few promising aspects of Nepal's post War II history. It has often been used as a face-saving instrument by development actors who have been engaged in, if not responsible for, the five decades of "failed development" in Nepal.ii The positive image of Community Forestry in Nepal has been articulated not only in the fields of development and natural resource management, but also more widely from a governance perspective, with the assertion that the local-level institutions for forest management (known as Community Forest User Groups or CFUGs) and their networks provide a model of democratic governance (Ojha and Pokharel 2005).

The program initially received major impetus from international agencies, but later became owned and sustained by local actors and institutions. During the early 1980s, Nepal's mountains were widely perceived as a site of a double crisis, affecting both the environment and livelihoods locally and beyond (Eckholm 1976). Around the same time, a global environmental movement was gathering momentum. The Nepal Himalaya became a matter of concern and international agencies began to pour in technical and financial support (Gutman 1991), initially to establish forest plantations as a quick fix, but later to address policy and institutional drivers of deforestation (Gilmour and Fisher 1991). The first institutional shift occurred in 1978, when a forest regulation was enacted which

provided local government bodies (Panchayats) limited rights to manage designated forest areas (Malla 1997). Later, in the early 1990s, a more sweeping devolutionary shift occurred through the promulgation of an entirely new Forest Act 1993 which allowed forest dependent communities to directly participate in and take control of forest management at the local level.

Community Forestry has evolved in the context of progressive political change in Nepal, as the government moved away from the Panchayat system under Nepal's feudal monarchy (until 1990), then through a multi-party system with constitutional monarchy (until 2006), to the currently evolving inclusive and republican multi-party polity. A key effect of these political changes is that local people have increasingly been able to claim rights over forests as active political agents rather than passive recipients of government service (Paudel et al 2009). Through wider civic movement as well as the expansion of CFUG networks nationally, the traditional top down state power has been countervailed by a strong civil society, and the discourse and practice of Community Forestry in Nepal is now shared equally by the government and civil society (Luintel 2006).

Spaces for and practices of deliberation among diverse actors have expanded, forging collaboration and social learning in support of decentralized and community-based management of forests in Nepal (Ojha, Timsina, and Khanal 2007; McDougall et al 2008).

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

According to Hyman (1985) community forestry projects must place a high priority on socio-economic objectives. Shrestha (1993) carried out a detailed longitudinal case study of the Thakuri of Diyangraun, Jumla district, showing socio-economic changes within the group with reference to nature and the extent of use of natural resources, particularly forest.

Rural people have been responding to socio-economic and environmental changes and have devised solutions and strategies to tackle the problems they are facing. Many of strategies are based not only considerations rationale, but

based on environmental terms. Overall socio-economic development and increased economic activities in Nepal have led to the rapid transformation of some rural agrarian society to an open and market oriented one (as in Kavrepalanchok, market influence in greater than other remote hill districts due to its proximity to Kathmandu (Malla 1993)

Case studies of forest user group in two districts (Baitadi & Achham) done by Chhetri and Pandey (1992). Suggested that people's active participation is a key solution to effective management of common property resources particularly forest.

People's participation is the main pillar of community forestry program. According to Shrestha (1987) where ever forests can be seen in the hills today, they are invariably the result of local management. The period between1956-1978 proves that without the participation and cooperation of the people the forest resource development program doesn't work.

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

Dahal (1994) carried out various case studies of forest users groups in eastern part of Nepal. These studies suggest that the main strategy of HMG a master plan is to promote people's participation in forest resources development and to develop community forest user groups as one of the main for the forestry sector.

Kayastha (1991) argued that involvement of women is crucial for the success of community forestry. Women are the major collector's forest products such as fuel wood, fodder and foods from the forest. They cook food and do most of the domestic work. Therefore, it is they who suffer the social and economic consequences of deforestation most directly, having to spend more time and walk longer distance in search of this essential forest product. There is a complete women's forest committee in Darchhula district, which is performing very well (Chand and Wilson 1987). But it may not be the same else where.

Messershmidt (1992) noted that equality is not a necessary condition for success in cooperative system and that hierarchical social structures are not

necessarily incompatible with some forms of cooperation. Equity involves getting “Fair Share” not necessarily an equal share. What is regarded “a fair share” varies according to different situation. MC Drugal (1979) for example, said that the “Rai System of Natural Resource Management” provides fairly equitable distribution of resources” and preserving the local forest.

The strength of the community control system is that they are publicly debated, easily understood and enforced, site specific and flexible enough to adopt to changing circumstances, They provide the most workable bassis for management technique (Campbell, Sherstha and Euphrat 1987) community forestry is the most viable option to ensure that hill formers can control and manage their forest in a sustainable fashion. Hence, community forestry is the most appropriate of the entire forestry program. However, the community forestry approach has got some limitations for example, the market side is ignored, some community forests are flourishing while, and others are degrading.

Government has published various policies and regulation related forestry sectors. The master plan (1989-2010) brought by the government presents a comprehensive strategy for 21 years of management of forestry in Nepal, dept. of forest publishes a journal called “Hamro Kalpa Brikshya” every month and “Hamro Ban” every year. Likewise, CFD publishes CF bulletin and FECOFUN publishes samudayik abhiyan and HMKMT publishes “Sarasi”. This way many GOs, NGOs an INGOs are publishing many matters concerned with community forestry.

Community forestry program in Nepal represents arguably the most advanced and progressive model worldwide for the participatory management of natural resources. Though, the importance of community forest products to the households living in the rural areas has been increasingly recognised, the program is however, not yet able to fully ensure equitable, gender sensitive and poverty focused outcomes. Detailed analyses on the level of participation of user household in major forest management activities and the contribution of community forest resources to the livelihood of the rural poor, remains a critical gap. This study examines the factors influencing participation of user households in community forest management activities, namely; forest protection, resource utilization and decision-making. It also investigates the variation in degree of dependence on community forest income and how the dependence is conditioned by the key household characteristics among the user households.

The study was conducted in five selected forest user groups in Kaski district, Nepal. The analyses are based on primary data collected through household survey using a random sample of 176 respondents, comprising 69 males and 107 females. Office records, informal interviews and direct observation were the other sources of information. Chi-square tests and correlation analyses were employed to examine the strength and direction of relationship between the different selected social, economic and biophysical factors and participation. Three ordered logit regression models were developed to identify the determinants of participation of the households in forest protection, resource utilization and decision-making. Descriptive statistics, Gini-coefficients, and multiple regression analyses were employed to quantify the community forest income and the level of dependence on community forest resources.

The study suggests that participation in community forest management activities is dependent upon various social, economic and biophysical factors. Larger sized households, represented in forest user committee, who are from the larger forest user groups, managing smaller forest area and who own less land were the more active participants in forest protection. Women of the larger sized households, who reside close to the forest and market, showed their strong positive influence on participation in forest resource utilization. The key factors identified for the low participation of women and lower caste in decision making were education and traditional customs causing low representation in forest user group committee.

The result shows that community forest income contributed an average of 7.4% of the total household income, which is equal to 56% of the total forest income of the user households. The main sources of community forest income are fuelwood, fodder, ground grass and leafliter. The middle class households derived more than twice as much community forest income compared to the rich and the poor households. Households who own more livestock and have access to larger area of community forest are extracting higher value of community forest income. As the income level raised, the dependency on community forest income declined. Cash income, agricultural income and other forest income have the inverse relation both with community forest resource use and dependence. The community forest income is more important for the poor and had a strong equalizing effect on local income distribution. There is a need to establish the

approach of community forestry with further emphasis on socio-economic objectives (Chhetri, 2005).

2.2. Related Literature Review

Community Forest Program was officially started in late 1970s in Nepal. All kinds of forest activities were run by the government before community forest program. Jungle areas were nationalized in 1957 A.D. Rural people was prohibited to use the forest production. There were strict rules, regulations and punishment systems to the miss-users of the forest. Rules, regulations and strict punishment systems could not stop forest degradation and wildlife trafficking. Therefore government planners, Scholars etc, became compelled to think about alternative management of the jungle. A 21 years long master plan was made in 1989 (2045 B.S), which gave the first priority to the Community forest. As a result "Sanu Ban Pande Goun" of Kavre district, Tukucha V.D.C.-1 was legally handed over in 2045 Asar 28th to the community. It was the first Community forest in Nepal. In the same year Community forest user group (CFUG) executive committee was formed in Dhankuta district. Thus Community forest laid the foundation stone in the history of forest in Nepal. After the provision of the community forests, many rural communities have been involving in the utilization and management of forest. We have very famous proverbs like 'Hariyo Ban Nepalko Dhan' (forest is the wealth of Nepal) and 'Jahan Jungle Hunchha, Tyahan Mangal Hunchha' (Timalsina, 2004).

Community forest was expanded to include the mobilization and empowerment of the community forest users groups. Community forest is playing vital role to stop forest degradation. It is supporting rural people such as livelihood and social justice, good governance and active forest biodiversity management. It is supporting for poverty alleviation and environmental protection as well. As a result 9,96,710 hector of total area is handed over to the local communities till now. The average size of the community forest is 79, 48 hectors. Altogether 1,40,00,30 numbers of households are involving in the community forest. Likewise over 33% of the total population of the country is benefited from the community forest and total number of community forest users group is 12,540 (Timalsina, 2004).

The available literature all most covers the main issues in community forestry management in Nepal. However, the management system of forest might be different in different physical, socio-economic, socio-cultural setting of the country. This study attempts to look at the impact evaluation of “Balkumari Community Forest of Ugratara”.

2.3. History and Evolution of Community Forestry

Forests have historically taken a central place in local livelihood practices and national politics in Nepal because of their importance in rural livelihoods as well as state revenues (Ojha 2008). Analysts have usefully delineated three phases of forestry in Nepal – privatisation (until 1957), nationalisation (between 1957- late 1970s) and decentralisation (from the late 1970s onwards) (Hobley 1996). While most forests in rural Nepal used to be controlled and managed by local communities before centralized control by the state came into effect in the late 1950s, the call for citizen participation began in the late 1970s when the government explicitly admitted that it could not protect the country’s forests without the active co-operation of local forest dependent citizens.

Throughout Nepal’s modern history of the past 240 years, the Nepali state has been largely controlled by the Shaha and/or Rana families, except three brief periods of democracy – 1950s, 1990s and after 2006. Under their control, the state polity retained a strong feudal character that involved the flow of power from either the Shaha or Rana families, and the flow of economic surplus from the peasant farmers to the ruling elites through networks of locally based feudal lords (Regmi 1978), although there was gradual decline in that control apparatus after 1951. Until the Private Forest Nationalisation Act was enforced in 1957, all forests were controlled by state-sponsored local functionaries. As the state moved further into the era of planned development after World War II, national bureaucracies assumed political-economic control of resources in ways that served the interests of the ruling elites (Blaikie et al. 2002). A number of laws were enacted to enforce national control over forests, which effectively expanded the forest bureaucracy and excluded local people.v Although it was implicitly assumed that transferring forests from private groups to the state would enhance people’s access to forest Draft for circulation. 13 resources, in reality the state instituted stringent

regulations to exclude people from controlling forest resources and created a strong techno-bureaucratic field (Ojha 2008; Malla 2000).

Key policies for Community Forestry in Nepal Efforts to share power over forests with local people started in 1978, with the institution of Panchayat forest regulations, and was prompted by the realisation within the government that the state forest bureaucracy was unable to protect forests without engaging local people. This move was part of the Monarchical Panchayat system's strategy to thwart growing anti-Panchayat resistance, by offering people some economic and symbolic spaces in the local Panchayat. In the meantime, pressure was also growing from donors for explicit government commitment towards a shift away from centralised practices of development towards more decentralised processes.

During the 1970s, the projection of Himalayan degradation as a serious environmental crisis (Eckholm 1976) created increased pressure on international development institutions and donor governments to contribute to the conservation of the degrading Himalayas. This led to a shift in the development discourse away from an emphasis on infrastructure and technology transfer, and towards environmental issues (Cameron 1998). Moreover, Nepal's strategic geopolitical situation (being located between China and India) and fragile environmental condition attracted donors (Metz 1995), who viewed forestry and environment as the key elements of integrated conservation and development projects.

Several international agencies assisted the Nepalese government to formulate the Master Plan for the Forestry Sector (MPFS), which recognized the need for local people's participation in the conservation and management of the country's forest resources. In 1989, as the MPFS was being finalized and formally adopted by the government, an on-going movement against the Panchayat system by the citizenry also culminated in the reinstatement of multi-party democracy in the country. The decisions of subsequent governments further strengthened the regulatory framework of community-based forest management in line with the MPFS. The most significant regulatory development in support of Community Forestry was the enactment of the Forest Act in 1993, by the first elected parliament after the 1990 movement for democracy. The 1993 Forest Act guaranteed the rights of local people in forest management (GON/MFSC 1995), enact such radical forest legislation allowing local communities to take full control

of government forest patches under a community forestry program (Malla 1997; Kumar 2002).

Meanwhile, international agencies continued to support the process of reorienting government forestry officials to work as facilitators of community based forest management, and away from their traditional policing roles (Gronow and Shrestha 1991).

The Community Forestry program in Nepal evolved from a primarily protection-oriented, conservation-focused agenda during its initial years of implementation, to a much more broad base strategy for forest use, enterprise development, and livelihoods improvement. This occurred through an often confliction process spread out over more than a decade, during which sustained effort to engage with a range of CF stakeholders from practice and policy dialogue helped to clarify issues and develop a common vision. A well-recognised attempt in this regard has been the five yearly national workshops held regularly since 1987. Along with the evolution of CF in Nepal, the government forestry authority (mainly Ministry of Forest and Soil Conservation, and its Department of Forest) has also "reinvented" itself as a facilitator of community institutions away from traditional policing roles (Kanel and Acharya 2008; Niraula 2004). Evolution occurred across policies, institutions, and implementation modalities, ultimately leading to a much stronger, more sustainable, and effective Community Forestry system (Pokharel et al 2008). The experience of CF has also been adapted and scaled up in different contexts in Nepal, leading to at least five other institutional regimes of forest governance: leasehold forestry, collaborative forest management, community based watershed management, integrated conservation and development, and protected area buffer zone forestry (Ojha, Timsina, et al 2008).

One of the keys to the establishment and successful outcome of Nepal's community forestry system was the creation of appropriate institutional structures at local, meso, and national levels that included downward accountability and relatively unrestricted decisionmaking at the local level, and effective cross-scale interactions among these various institutions.

At local level, this included provisions for sub-committees within CFUGs, and the establishment of elected hamlet-level representatives to ensure that concerns of various constituencies within the CFUGs were expressed (McDougall

et al 2008). facilitation, technical, and information exchange functions between national priorities and local contexts. Such interactions particularly contributed to better exploitation and wider dissemination of market opportunities by CFUGs (Banjade et al 2007), with its related positive impacts on household livelihoods.

Other institutional factors in the successful evolution of Community Forestry included efforts to improve the inclusion of all social groups (especially after the mid-1990s, when the Maoist movement also gained momentum through the agenda of inclusion), concomitant democratic processes (Pokharel et al 2007), and provision of adequate time and space for frequent discussion, exchange, adaptation, inclusion, and interaction among stakeholders (Banjade et al 2006).

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

A variety of methodological innovations also helped to improve Community Forestry implementation, such as Participatory Action Learning (PAL) (Malla et al 2002), Adaptive Collaborative Management (ACM) (McDougall at al 2008), participatory and self-monitoring (Banjade et al 2008), and approaches that specifically targeted pro-poor livelihood improvements, linking civil society, governance, and democracy with natural resource management (Luintel et al 2006). Such innovations addressed relationships among a wide range of participants in the forest governance arena and have triggered pro-poor forestry practices (Kanel and Subedi 2004). Governance practices that were changed encompass a broad range of activities – learning, planning, decision making, mobilizing the marginalized groups to create pressures on elites, developing clearer vision, indicators and purpose of the organization, monitoring, transparency, re-election of executive committees, creating ownership in the organizational change processes, improved communication, and public hearing and auditing.

As a result of improvement in governance practices, changes in governance outcomes included more equitable benefit sharing, enhanced transparency, participation and accountability, and pro-poor resource management practices (Luintel et al 2006; Shrestha et al 2009). Many of these innovations came in response to the emergence of second generation issues in the mid- 1990s, and were facilitated by national NGOs, often with technical support from international organizations and bilateral donor projects.

Since 1990, the process of community forestry has been increasingly promoted and scaled up by an expanding public sphere, often operating outside of government and donor projects (Ojha et al 2007). There are increasing instances of proactive engagement of civil groups in forest governance in recent years in Nepal. Of particular importance has been the establishment of a meso-level umbrella institution of CFUGs which represents the interests of local level actors and serves as an intermediary between national and local processes. This nationwide network of CFUGs, known as The Federation of Community Forestry Users, Nepal (FECOFUN), has emerged as a key player in forest sector policy debates (Ojha 2002; Ojha and Timsina 2008). These civil society groups have further politicised the practice of forestry and in many respects provided a deliberative bridge between people and the state (Ojha et al 2007).

Along with NGO alliances, it has brought civil society perspectives into the policy-making process that used to be dominated by technocrats and bureaucrats. The most important policy issue in which FECOFUN has made significant contributions in the past few years concerns the extension of CFUG rights over forest resources in the hills as well as in the Terai. Through FECOFUN, the legal provisions relating to community forestry were spread to areas where there were no prior donor-driven projects, or where District Forest Officers were not as enthusiastic about community forestry implementation (e.g. in the Terai). In addition, FECOFUN has played the role of CFUG watchdog in national and international policy arenas. FECOFUN's awareness raising activities have helped to enhance the political capital of CFUGs beyond the traditional patron-client relationship with the Department of Forests.

Successful scaling up of community forestry also required a nationwide overhaul of local and District Forest Offices (DFOs), with an emphasis on the reorientation of forest officials.This enables DFOs and forest officials to reorient

their skills towards co-management, assistance rather than their previous role as the dominant authority and decisions-maker in forest management (Acharya 2002).

Lastly, scholars have further enumerated a number of specific conditions and factors that played a significant role in the successful evolution of Community Forestry in Nepal. These include:

- Media projection of the crisis of Himalayan degradation and consequent international assistance (Gutman 1991);
- Inaccessibility of Nepal's hill and mountain forests for commercial exploitation;
- Inability of the Forest Department to manage forests effectively, especially in the middle and high hills (Gilmour and Fisher 1991; Subedi 2006);
- Emergence of multiparty political system in 1990 and consequent expansion of civil society spaces (Ojha 2006);
- Willingness of elected government to legally empower local communities to manage forests (Ojha 2006);
- Presence of existing forest-based livelihoods systems in rural Nepal and incentives for local people to participate in forest management for a range of forest products and livelihoods opportunities (Gilmour and Fisher 1991);
- Presence of existing dense social networks and traditional models of collective action around local forest management in Nepal (Fisher 1989; Chhetri and Pandey 1992);
- Continued tradition of piloting and reflection among CFP stakeholders, including regular five yearly nation-wide workshops since the 1980s (Pokharel et al. 2007; Ojha and Timsina 2008);
- Increased research and scholarly interests in community forestry;
- Breaking down of traditional relations of power through political movements, and emergence of 'subaltern' groups taking leadership power at the CFUG levels (Bhattarai 2006).

Community Forestry has had a net positive effect on livelihoods and a range of other development concerns in Nepal, but a number of challenging

issues were encountered during implementation, and some continue today. Management models, operational plans, and related implementation processes initially adhered to blueprint models provided by the Forest Department, and focused on forest protection rather than use for livelihoods improvement (Dougill et al 2001). Over time, management and operational plans gradually evolved to reflect individual CFUG goals and took on a much greater livelihoods-oriented emphasis. This was also reflected in the design of forestry programmes under a livelihoods framework, such as DFID's Livelihoods and Forestry Program that began in 2000. This went hand in hand with the adaptation of appropriate extension skills within the Forest Department and District Forest Offices, in order to provide effective technical assistance to CFUGs and to assist with management decision-making (Dev et al 2003).

Forest management also became more technically complex beyond the initial simplistic plans. Initially, CFUGs were required to have only one document containing both constitutional aspects and forest management rules (Ojha et al 1997). Since 1995, two separate document have been required – a constitution and a forest management operational plan. Additional technical aspects of Community Forestry included developing readily usable tables to estimate biomass, timber volume, and annual harvesting yields (Acharya 2002). An inventory guideline was enforced in 2000, which was guided more by technocratic control than to facilitate democratic forest governance (Ojha 2002). However, stakeholders later came together and developed a common understanding on the format and process of forest inventory, which was incorporated into the revised forest inventory guidelines of 2004 (Paudel and Ojha 2008).

Another set of challenges stemmed from issues related to the distribution of benefits (forest products and income), social exclusion and marginalization of traditionally disadvantaged groups, elite capture of benefits and decision-making processes, and transparency in managing CFUG funds (Kanel and Kandel 2004; Chhetri 2006). After these problems were identified, several CFUGs began to include explicit provisions for greater benefits to poorer groups, women, lower caste groups, and other marginalized groups in their operational plans (Bhattarai 2006; Banjade et al 2008; Kunwar, Neil, et al 2009). Bhattarai (2006) identifies interactions and knowledge networks that influenced the perceptions of local

elites about themselves and the poor, thereby triggering pro-poor forest management and utilization practices in the CFUG.

Examples of pro-poor innovations generally include designating loans, land for cultivation, or areas of the community forest for fodder collection to be explicitly reserved for marginalized groups or poorest households, and setting up women-dominated small business enterprises (Joshi et al 2006). In several cases, community fund-raising through sale of forest products has also been used to fund rural infrastructure or social development works that address the needs and concerns of the poor and disadvantaged.

Equitable rather than equal distribution of forest products and benefits has been crucial to improving livelihoods, because the poorest households in Nepal are more dependent on forest products and forest-derived sources of livelihoods, since they have little or no land of their own from which they can obtain such products. An equitable distribution method for forest products, in which the CFUG collectively ranks households on the basis of relative wealth and subsistence needs, has led to greater livelihoods security for the most vulnerable households and gone further towards meeting Community Forestry's poverty alleviation goals (Shrestha and McManus 2008).

The Livelihoods and Forestry Programme in Nepal has supported a number of CFUGs to provide exclusive management rights to groups of poor households, for cultivation of income-generating crops and agro forestry. Although currently few in number, some CFUGs do provide community lands to their landless or near-landless members, so that they can earn their living through cultivation of medicinal herbs or other crops. Several CFUGs give preference to poor members or women in locally created jobs, such as for processing of handmade paper or working as a nursery laborer (Subedi 2006).

2.4. Sustainability of Community Forestry in Nepal

Community forestry in Nepal is not entirely an external intervention. It is indeed a negotiated process of forest governance between local communities and the state, with additional developmental inputs from donor funded programs and advisory and advocacy inputs from NGOs. Thus, when we refer to 'Community Forestry', we do not merely mean a government program but a complex set of

social-ecological interactions involving local communities and their institutions, government policies and programs, and associated technical, institutional and political processes at multiple levels, which affect forest management choices and actions of local people (Ojha et al 2009).

From this perspective we argue that the question of sustainability should not be focused towards external intervention, but should focus on local processes and then move up the scale to examine the effects of wider contextual drivers.

Likewise, sustainability analysis should not be confined to sustainability of the government program inputs. Sustainability is not understood merely as net present value of a stream of economic benefits but also by the sense of place and belongingness to a community, social identity and power relations, social capital and civic engagement, and local worldviews and knowledge. Seen from these perspectives, Community Forestry in Nepal appears to be by and large moving along a sustainable trajectory.

As we outlined in section two, Community Forestry processes have continuously expanded over the past three decades – in terms of the number of CFUGs formed, area of forest handed over to community management, and the number of households/families involved.

During this period, the level of involvement of donors and government organizations has reduced while the involvement of NGOs and CFUGs networks has expanded. The space for decentralization and community participation in natural resource management was partly strengthened by the parallel processes of political mobilization and growing consciousness of people in Nepal about self-governance and democratization. Above all, the immediate livelihood benefits derived by rural households – as an input to agriculture, food security, and cash incomes – are the key behind strong collective action within local communities to actively manage their forest resources.

Community forestry is sustained by a legally defined tenurial structure which is well accepted by local communities and wider Community Forestry stakeholders. Radical community rights activists do not demand change in the legal system, unlike many other contexts, but monitor changes in the existing legal framework that may impinge on community rights. While issues of tenure and power sharing between local communities and the government is legalized and provides secure tenure rights to local communities, there are at times

tensions between local communities and the government in defining, interpreting and enacting these formally agreed rights (Shrestha 2001; Ojha 2006). This tension sometimes overflows as street protests or intense negotiation, and cultivates a feeling of instability and confusion over tenurial security even as it strengthens the claims of local communities. The recurrent issue is the extent to which processes of policy making, program planning, and implementation provide opportunities to local community groups and civil society networks to influence forest governance. The debate is not so much at the level of principle or legal arrangement, but at the level of everyday practice, in which actors seek to defend or maximize their self-interests. This is particularly serious when it comes to registering CFUGs, planning forest management, and harvesting and marketing forest products from community forests. Table 7 summarizes key risks and opportunities related to the long term sustainability of Community Forestry in Nepal. It lists some real risks but also identifies numerous opportunities that are available to Community Forestry actors to deepen the sustainability of Community Forestry in Nepal.

2.4.1. Economic/financial sustainability

Nepal's Community Forestry is still largely a part of subsistence livelihoods systems, with non-monetary transactions dominating forest management. Due to the absence of any rapid expansion of capitalist production in rural areas of Nepal (Blaikie et al 2002), the opportunity cost of labor is low and this makes possible the substantial voluntary contribution that must be generated to undertake forest management. Local actors choose to contribute their time and labor, to large extent, because forests represent a socio-political arena for them to engage in cultural and political exchanges, and also allows them to further shape the collective identity of a community. In recent years, local forest-dependent people are becoming increasingly conscious of civil, political and economic rights, and marginalized groups such as dalits and indigenous groups are seeking pro-active involvement in different spheres of forest governance. Clearly, participating in forest management is not only driven by economic benefits but through a variety of cultural, symbolic and political benefits that are gained through acting collectively in the forest governance arena (Ojha et al 2009).

However, in recent years there has been an increasing expectation of cash benefits from market transactions, such as through the sale of timber and non-timber forest products, to meet the growing livelihoods needs of forest dependent communities (Banjade and Paudel 2009).

Depending on the location of a community forest, timber and several high value non-timber forest products have good local and international markets. Timber in the low-lying Terai and medicinal plants of the higher Himalaya are well-known. These products have emerged as a source of cash incentives to local communities. In recent years, there are attempts to increase capacity of CFUGs to promote enterprise-oriented use of forests (Subedi 2006). Despite growing evidence of the positive role of economic incentives in forest conservation, through small-scale forestry enterprises, the policy environment is still too restrictive to support and encourage enterprise-oriented management of community forests (Banjade and Paudel 2009; Kunwar et al 2009).

The nature of household dependence on forests is also changing, and the direction of change varies across different contexts. In areas where out-migration is common, people's dependence on forests has decreasedfor two reasons – increased access to cash incomes from distant non-farm sources, and the decline in the supply of active human resources. This may lead to reduced pressure on forests. In other contexts, such as the Terai where the land is fertile and there is still a large area of de jure government forest under de facto open access, forest immigration has continued. This has created added pressure on forest land. There are instances of squatters organising as a CFUG and managing forests in a sustainable way (Pokharel 2000), as well as incidents of squatters confronting a CFUG over land for settlements. Such conflicts are highly politicised, and CFUGs and their federations have had to face tremendous pressure from political interests. CFUGs have also organised themselves to protect forests and community forestry. In the emerging context of climate change, once again, the perceived value of forest land is growing compared to competing land uses. The government of Nepal and other stakeholders are piloting and exploring the possibilities of forest carbon marketing from Community Forestry.

A separate government unit has been established within Nepal's Ministry of Forest and Soil Conservation to deal with the issues of forest and climate change. Given that the global forest sector contributes to one-fifth of global green house

emissions through deforestation and degradation (Stern 2006), there is a possibility that carbon revenue may provide added incentives for community participation in forest management (LFP 2009). But there are also fears that the emergence of carbon forestry may trigger a reversal of forest tenure reform, potentially undermining the rights of local communities under community forestry (Dahal and Banskota 2009).

After three decades of Community Forestry now in place, studies show that Community Forestry has proved much more effective than government management from a financial point of view. Kanel (2004) argues that, based on a study conducted in 2002, the annual income of the Department of Forest controlling 75% of Nepal's forest area is about NRs 680 million, while the income of CFUGs controlling 25% of the forest area is NRs 740 million per year.

CFUGs are still found to be earning less than they could under a sustainable use approach to forest management, with estimated earnings far less than expected from an economic perspective (Niraula 2004b). This resonates with the widely held viewthat community forests are protectionoriented and under-utilised (Pokharel et al 2008).

Despite greater efficiency compared to government, Community Forestry in its own right is yet to be managed effectively. Since per capita forest area in the middle hills is relatively low (for example 0.5 ha per household in Ramechhap and Dolakha districts), management and utilization needs to brought to the highest sustainable level (Nurse et al 2004). Current harvesting level is less than 1% of the growing stock (Pokharel et al 2008). This is again related mainly to the techno-bureaucratic control over forest management planning, and a lack of service delivery system that is independent of bureaucratic control.

In the initial stage, and to some extent up until the present, Community Forestry has been largely a donor-funded process, and some argue that it is somewhat unclear how financial support for the program will continue as donor-funds are scaled back (Pokharel et al 2008).

Donor support for the Community Forestry program, which covers up to 16% of CFUG costs, is currently unsustainable, even after 30 years of implementation. But we argue that this is indeed a governance problem, and not a financial constraint, mainly because the local level Community Forestry processes have built sufficient momentum in Nepal, demonstrating the willingness of local

communities to make the investments necessary to establish and operate CFUGs. Moreover, the CFUGs have been able to generate a substantial amount of funds even under a protectionist approach to forest management, indicating a potential for meeting overhead costs more fully through increased production-based Community Forestry.

If CFUGs believe in the credibility of the Community Forestry programme and own it, and if the government's role is limited to regulation and technical support to that private and non-governmental service providers are allowed to work directly with CFUGs in other areas of service delivery, then the cost of the Community Forestry programme will be low enough to be covered by a levy on Community Forestry production itself. But to date, CFUGs and their networks are opposed to paying any extra tax to government, and this should be seen in the context of limited credibility and legitimacy of the government.

Another set of evidence for financial sustainability of Community Forestry in Nepal is that in several districts, Community Forestry has become functional, and perhaps more effective, in areas where there has been no or minimal donor program support.

This is the case of Terai districts in general (Dhungana and Bhattarai 2005) and several hill districts outside of bilateral project areas. CFUGs are also becoming part of sub-national, national, and international networks, gaining greater access to information and institutional development services. After the mid-1990s, civil society groups have taken much of the responsibility for expanding Community Forestry.

Lastly, a key issue for financial sustainability at the CFUG level is equity in sharing forest products and related pricing mechanisms. Recognizing the hidden subsidy (Iverson et al 2006) accruing to local elites, many CFUGs have begun to adopt differential rates for households with different wealth statuses.

Still, wealthier households may make more effective use of these benefits quotas which poor households cannot capitalize on, for instance timber benefits. The issue is whether forest products should gradually be sold at market price, be it within or outside the group, to maximize financial revenue that is then used to support the livelihoods of the poor in ways that really suits their needs.

2.4.2. Environmental sustainability

No comprehensive studies are available to assess the environmental outcomes of community forestry, but both case studies and general observations suggest improvement in forest conditions (e.g. lower incidence of fire and illegal harvesting of various forest products, better controlled grazing, higher tree density in formerly degraded forests, increased species diversity, regeneration of important species (Dougill et al 2001, Dongol et al 2002, Acharya 2002, Dev et al 2003, Yadav et al 2003).

Amidst growing concerns of the negative environmental impacts of development activities, the government of Nepal has also developed Environment Impact Assessment (EIA) / Initial Environmental Examination (IEE) guidelines. A similar instrument developed by the Ministry of Forest and Soil Conservation outlines EIA procedures for transferring forests to Community Forestry, and for undertaking forestry operations. However, this instrument was developed with limited participation or inputs by the CFUGs federations, and has been opposed by CFUGs and their organizations. Given the dissatisfaction on the part of CFUGs, such instruments of sustainability may ironically have negative effects, if imposed without involvement of the intended targets.

At the level of CFUG management, the issue of forest ecological sustainability is strongly addressed. Forests are generally put under a protectionist regime immediately after a CFUG is formed, and harvesting is generally done on the basis of block-based management, and in combination with an inventory and assessment of mean annual increment. Community Forest users also often patrol forests in groups during the day and night to protect forests from external free-riders.

Several studies suggest that there have been improvements in forest condition, forest land use change, and biodiversity following community management. Branney and Yadav (1998) assessed the change in condition of community forests between 1994-1998, in four districts of the Koshi Hills. They found that the number of stems increased by 51%, basal area increased by 29%, and grazing intensity compared to public forest declined from 94% to 74%. Karna et al (2004) analysed the forest condition of five community forests at five year intervals during 1993- 2003, and found that several parameters of forest condition

such as tree and sapling density and sapling diameter increased during the subsequent measurements.

Gautam et al (2003) analysed changes in land use in a watershed covering an area of 153km2, by comparing satellite imagery from 1976, 1989 and 2000. They found that the number of forest patches declined over time (from 395 in 1976 to 323 in 1989, and to 175 in 2000) while the average patch area increased over the same periods. This was attributed to the merger of previously isolated small forest patches as previously degraded areas regenerated or came under forest plantation under community forestry. They also found that although 22.5% of forest area was converted to other land use during 1976-2000, 37.4% of land under other uses came under forestry during the same time period and resulted in a net 14.9% increase in forest area in the watershed. A land use change study in two central districts, using aerial photographs from 1978 and 1992 along with rapid field assessment, found that the area of forest land increased from 7,677 ha to 9,679 ha (37.5%) over the period assessed. The authors attributed the increase primarily to forest plantation establishment, as well as some increase in the area of mixed natural forest (Jackson et al 1998).

Nagendra et al (2008) used Landsat imagery from 1989 and 2000 to analyze land cover change in three management zones (government control, buffer zone around protected area, and community forestry) using landscape ecology metrics and proportional distribution of land cover categories. The results showed significant differences in terms of land cover dynamics and landscape spatial pattern between these land ownership classes, and suggested greater improvement of forests managed under community-based institutions. Another study compiled data from 55 forests from the middle hills and Terai plains of Nepal to examine factors associated with forest clearing or regeneration. Results affirmed the central importance of tenure regimes and local monitoring, including participation of forest users in the management processes (Nagendra 2007).

At both the sub-national and national level, a continuing issue is a lack of comprehensive monitoring. The Community Forestry Division of the Department of Forests does have a ‘National Community Forestry Database’, but in contains insufficient biodiversity information and is not updated with sufficient frequency. Data generated by donor projects are specific to project areas, and the ability to collate similar information across projects is limited because each project collects

data that is most relevant to their particular interests. More recently, schemes of forest certification have been introduced by adapting global lessons and methodologies (NFA 2007). But these have not yet been popular among CFUGs, partly because certification is not yet linked to enhanced commercial benefits. Some analysis suggests that biodiversity and community governance are related; if diverse views and preferences regarding forest management are accommodated in the CFUG decision-making, there is a greater likelihood of favourable biodiversity outcomes (Banjade 2008).

2.4.3. Social and political sustainability

At the wider level, Community Forestry has been heralded as a success, though issues of inclusion and management effectiveness remain important challenges, even as they have improved from early years of implementation. Emergence of strong civil society institutions to promote Community Forestry has politically deepened the Community Forestry process, beyond the technical and largely apolitical approach adopted by government extension agents. CFUGs have organized themselves into strong networks such as FECOFUN and demonstrate themselves in the national arena as politically mobilised actors, even participating in street protests defying the King's takeover of power in 2006, in which many FECOFUN activists were detained by the Royal regime (Pandey, pers comm). Today, CFUG networks are part of every policy debate that affects local forests and people. Because of this social and political mobilization, political parties strongly support of Community Forestry in particular and decentralization of natural resource management in general. For this reason, Community Forestry appears to be a viable institution during conflict as well (Banjade and Timisina 2005; Pokharel et al 2005). Nevertheless, political interests can overwhelm local dynamics, as when political parties seek to influence elections of CFUG federations (Ojha et al 2008).

At the level of discourse and knowledge, the mobilization around community forestry has challenged the traditional hegemony of a techno-bureaucratic ideology. Scholars from multiple disciplines have taken a keen interest in Community Forestry as it relates to biodiversity, livelihoods, and policy. Such scholarship has contributed to deliberative engagement between multiple

stakeholders. Noted international scholars in the social and environmental sciences have undertaken case studies of Nepal, thus promoting the discourse of devolution globally. This is paralleled with the culture of collaborative policy making (such as five yearly national workshops and regular multi-stakeholder policy deliberation groups) on the part of government officials. Lessons from the successful CFUGs are being scaled up in other sectors.

A critical issue affecting the political sustainability of Community Forestry is how the relationship between CFUGs and the Forest Department is structured and transformed. Despite some changes in attitude and behaviour of the forest officials towards working with local communities, largely as a result of the community forestry movement in the hills, the orthodox image of forest bureaucrats has not changed much (Ojha 2006; Pokharel and Ojha 2005). Power differentials between local people and foresters continue to be large, and ordinary citizens and forest bureaucrats still have problems of mutual mistrust, with limited opportunities of direct deliberative engagement. The majority of foresters still attach great value to what can only be labelled as techno-bureaucratic approaches.

Overall, the strong interests of local communities in forest governance and a sustainable approach to forest management adopted by them are the key foundations of sustainability of Community Forestry in Nepal. CFUG networks and civil society actors have challenged the top down approach of government. Community Forestry is well respected by political parties despite some strategic influences. CFUGs have become durable institutions supported by an active and vibrant network of CFUG federations, all contributing to the socio-political sustainability of Community Forestry in Nepal.

Chapter III : RESEARCH METHODOLOGY

3.1. Research Design

A descriptive research design has been adopted in this study. This research design tends to find out the overall impact of community forestry in Ugratara VDC.

3.2. Selection of the Study Area

Balkumari Community Forestry is located in the Kavre district. 109 households are living there as being the community forestry users. It was handed over to the community in 2058 BS. Evergreen types of forest or vegetation is there.

It is one of the researcher residential area too. Mixture of various ethnic groups has made a community. Local habitants have different political ideologies related to different political parties. The user's area is a multicultural area.

Secondly, Ugratara VDC lies near to Banepa municipality, an economically enhanced city. People nearby the city area are still under traditional concept. The economy of this VDC is far different than the nearest town.

Being closest to the town, Balkumari Community Forestry was not visible for the city dwellers for its research or study. Heterogenious culture, mixed economy, political socialization and some other factors attracted researcher for the study.

3.3. Sources of Data

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

3.3.1. Primary Data Collection

Primary data refers to the information which has originated directly as result of the particular under investigation. Primary data is mainly collected through structural and unstructural questionaries of all local users' household survey. The primary data has been required to find out the economic effect of Balkumari 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.

3.3.2. 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 three decades of the 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 VDC, DFO, departments of forestry and several related organizations as well as their websites. Research publications of these several organizations have been thoroughly consulted as secondary data for the study.

3.3.3. Sample Size

This study has been completed on the basis of census survey method. This study conducted within the users' area of Balkumari Community Forestry, including 40 households out of 109 which comes to be around 37 percent of the total sample size. Who can give the exact details were asked questions as questionnaires and by which real data and information were successfully collected.

3.4. Tools and Techniques of Data Collection

Different methods, tools and techniques of data collection were used to collect the primary data by the researcher. As a tool data collection, a set pre-tested questionnaire was used. Similarly, checklist was also used to obtain information from key information. To determine the forest use pattern, observations were made during the field visit. Each of above tools, is explained below —

3.4.1 The Household Survey (Questionnaire)

The household survey has been conducted using both structured and unstructured questionnaires. The basic quantitative information such as age, sex, educational attainment, landholding, occupation and other socio-economic and cultural characteristics of the households have been gathered through household survey.

3.4.2. Interview

The experienced and adult people of the village, local leaders, and educated persons, present and former FUG members were interviewed as key informants. Various aspects such as history of the forest protection, process and procedures of utilization of forest, decision making process in FUG, effectiveness of USG, etc. were collected by this tool.

3.4.3. Observation

During the period of field work, researcher observed the collection and use patter of forest product as participant as well as non-participant observer. This way, this was also one of the major tools of data collection. Conditioned of forest, types of plants in Balkumari Community Forest, visible benefits from the forest were determined through this tool.

Participant Observation is a key method of data collection for the research study. The researcher surveyed the physical condition of the research site and observed the program activities. Researcher participated in everyday life of the local people, as possibly, observed their regular activities for utilization of their resources and capabilities. Researcher also participated in various social gatherings and observed their planning, implementation and decision making process.

3.4.4. Selection of Key Information

A few information has been selected to obtain in depth information in the field of history of settlement, 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 Balkumari Community Forestry.

3.4.5. 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 the survey questionnaires. Important incidents, events and discussions are recorded in the hand dairy.

3.5. Method of Data Analysis

In this study, the data analysis has been tried to attempt in two methods. They are as follows:

3.5.1. Qualitative Data Analysis

All of the required information can’t obtain in terms of numerical form of quantitative form. So, some of the information (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.

3.5.2. 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. The gathered data were presented in different table. The frequency table, ratio table, and cross tabulation were used for the analysis of the primary data. The research data were explained to make the research report more analytical.

Chapter IV : DESCRIPTION OF STUDY AREA

4.1. Geographical Setting

Kavepalnchowk is geografically big districts in Bagmati zone, Central Development Region of Nepal. There are 3 municipalities and 87 VDC in the district. Balkumari Forest is close to Banepa Municipality, 2 km south-west form the main Bazar. It is situated in Ugratara VDC Ward No. 1 & 6. Ugratra VDC is situated $85^0$24' to $85^0$29' east longitude and $27^0$2' to $27^0$54' north latitude. This VDC lies between Nasikasthan VDC in the west, Banepa Municipality in the east, Ugrachandi VDC in the north and Mahendra Jyoti VDC in the south respectively. The forest is near by the Nursery of Dabur Nepal. The total area occupied by this forest in 44.25 hectare.

4.2. Climate

Ugratara VDC is situated at 140m. to 2050 m. from the sea level. The average annual rainfall is 1200mm and the average temperature is 5^o to 30^o Celsius. Two types of climate, Temperate in the low level and sub-tropical in the high altitude is found in the VDC.

4.3. Vegetation

The Natural forest of Balkumari forest and Shrubs can be seen, but the planted forest has covered 44.25 hectares. Various types of plants are found within this area, some of them are mentioned below—

Nepalese Name	Scientific Name (Botanical)
1. Uttis	Alnus Nepalese

2. Katus	Castonopsis Indica
3. Chilaune	Schima Wallicchir
4. Champ	Michelia Cathoarti
5. Rani Sallo	Pinus Roxburghii
6. Paiyun	Prunm Cerasoides
7. Bakaino	Metia azedarach (China Berry)
8. Kafal	Box Byrtle
9. Dhasingare	Gaultheria
10. Unyu	Fern
11. Kurilo	Asparagus

Likewise, there are so many other flora and fauna also found, Bans, Nigalo, Nimaro, Saur, phalant, setikath, Kukurdaino, Banmara etc, have large coverage. Fruits like orange, pear, peach, lime, lemon, haluwabed, the Chinese plum etc also found in this area, some people are getting big advantages from orange production.

The people of different places like Raut Tole, Khadka Tole, 25 Kilo, Thapa Gaun, Banepa Municipality etc. are the users of Balkumari forest. They are getting fuel wood, timber, fodder, leaf, litter etc. from the forest. The jungle provides shelter to the large number of wild animals such as leopard, rabbit, Jackal, fox, tiger and many birds like dove, crow, pheasant, tailor bird etc.

4.4. Socio-economic Condition

The socio-economic condition of Ugratara, VDC has strongly affected forest user group. The components of socio-economic condition which are examined population ethnic groups, education, housing, land and livestock possessed.

4.4.1. Population

Population plays crucial role in the change of socio-economic structure of an area. The population of Ugratara VDC is 5337, where the number of male is 2671 and female is 2666. The number of total household is 863.

Table 4.1

Ward Wise Population Distribution

Ward	Total Household	Male	Female	Total	Percentage
1	192	538	418	956	17.92
2	70	223	337	560	10.49
3	55	188	183	371	6.96
4	150	333	249	682	12.78
5	68	238	239	477	8.93
6	140	442	413	855	16.02
7	49	145	147	292	5.47
8	140	352	368	720	13.49
9	62	207	217	424	7.94
Total	926	2666	2671	5337	100.00

Source: VDC Record, 2008

4.4.2. Occupation

The main economy of the village is based on agriculture. About 75 percent of the VDC population has been involved in agriculture. Thus, agriculture has been an important economic activity in the study area. An impact on the well being of the farmer. The study is to know the well being of the farmer. The study area has good land for the cultivation. There is no problem for the irrigation. The main crops are rice, wheat, maize, potato, barley, millet, mustard etc. People are being attracted towards cash crops and unseasonable vegetable, but the agricultural sector is still trapped with the traditional system. Farmers are using chemical fertilizer and pesticides blindly. Apart from this, some people are engaged in other occupation such as trade, industry and service. The occupational distribution has been given in the table.

Table 4.2

Ward wise Occupational Distribution of Population

Ward	Agriculture	Service	Industry Trade	Unemployment
1	777	100	79	30
2	502	53	5	65
3	345	21	5	67
4	597	49	36	127
5	456	16	5	116
6	762	76	17	136
7	243	34	15	49
8	667	33	20	126
9	377	43	4	77
Total	4726	425	168	813

Source: VDC Record,2008

4.4.3. Educational Status

Education is the key indicator of human development. We can't realize civilization without education. Education is called the source of skill, capacity and knowledge. People of this area are being conscious about the education. The trend of opening school and giving informal education to the adult is coming into existence. There are altogether seven schools in Ugraatra VDC. The names of the school are mentioned in the table given below;

Table 4.3

Condition of the Schools

S.N.	Name of the School	Sector	Ward No;	Level
1	Dhanjyoti Primary School	Government	2	Primary
2	Sundarimai School	Government	5	Primary
3	Dhaneshwor School	Government	7	Primary
4	Kailash School	Public	7	Lower Secondary
5	Janajyoti School	Public	8	Secondary
6	Pragati Prabhat Sec. Boarding School	Private	1	Higher Secondary
7	Valley English B. School	Private	6	Secondary

Source: VDC Record,2008

4.4.4. Literacy

The status of total enrollment in the Primary Education is 80.4% in the country according to National planning commission, Final result of ninth plan 2059. The total number of literate person of the VDC is 3150, where the number of illiterate person is 2187. Following table shows the condition of the literacy rate in the VDC.

Table 4.4

Status of Literacy

Total Population	Literate	Illiterate	Percentage of Literate	Illiterate Percentage
5337	3150	2187	59.03	40.97

Source: VDC Record, 2008

The table mentioned above shows, the overall condition of the Literacy. Now, the given below shows Ward Wise Literacy and Illiteracy rate.

Table 4.5

Ward Wise Literacy and Illiteracy

Ward	Literate	Total Pop.	Percentage	Illiterate	Percentage
1	528	956	55.23	428	43.93
2	227	560	40.53	333	59.46
3	265	371	71.42	106	28.57
4	471	682	69.06	211	30.93
5	272	477	57.02	205	42.97
6	659	855	77.07	196	22.92
7	71	292	24.31	221	75.68
8	533	720	74.02	178	24.72
9	124	424	29.24	300	70.75

Source: VDC record,2008

4.4.5. Ethnic Group

Each and every society of Nepal is the mixture of Ethnic Diversity. There are so many casts and ethnic groups in Janagal Ugartara VDC like Brahmin, Cheetry, Newar, Tamang, Sarki, Damain, ect. The table given below represents the ethnic composition of the VDC.

Table 4.6

Ethnic Group

Costs/Ethnic Group	Total	Percentage
Brahmin	1168	21.89
Chhetry	2954	55.39
Newar	630	11.80
Tamang, Gurung, Magar	392	7.34
Damai, Kami, Sharki and others (Sudra)	193	3.6

Source: VDC Record,2008

4.4.6. Live stocks

The people of the study area are also engaged in animal husbandry and Supply milk to markets like Banepa, Bhaktapur and Kathmandu. Livestock farming serves as a source of income and also provides food for domestic purpose. They can use manure (dung) in the agricultural field and get more production. Given table-shows the status of animal husbandry in the study ;

Table 4.7

Condition of the Live stocks

Animals	**Number**	**Percentage**
Buffaloes	1416	45.07
Cows	557	18.37
Goat	826	26.27
Pig	201	6.40
Sheep	122	3.89
Total	3142	100

Source: VDC record,2008

4.4.7. Transport and Communication

The Araniko Highway passes through the middle of the village. The length of the road is about 17km including all black topped and grabbled roads. The main means of transportation is bus, truck and tractor.

Few people use bicycles and motorcycle for transportation purpose. Hence, the village has good transportation facilities. One can reach Kathmandu by bus within an hour. The detail about road facility of the VDC is given below;

Table 4.8

Road and Transport as per Ward

Ward No	Main Road in meter	Branch Road
1	700 (m)	1200m
2		900m
3		2km
4	400 (m)	700m
5		1500m
6		2km
7		200m
8	200 (m)	500m
9		2km

Source: VDC record,2008

The communication system is also good and satisfactory. Telephone and post office facilities are available. Daily and weekly newspaper arrives in time. Most of the people possess Radio, Many people own cassette players and some do have television. Many communication centers have opened E-mail, and interest services.

Postal Service is also good. One cable network has been established in Banepa and Distributed cable line in the village. Only one IT Park is being constructed nearby the study area. One daily and 9 weekly newspapers publish from Banepa. Furthermore, 3 community radios are being broadcasted from Kavre district. Therefore, the study area is positively affected by the communication.

4.4.8. Marketing

Most of the people of this VDC usually go to Banepa, Dhulikhel, Bhaktapur and Kathmandu to purchase goods for their daily needs and sale the products produced by the VDC dwellers.

4.4.9 Community Forestry in Ugratara Area

There are 61 community forests under Ugratara Range Post. Among them 6 CF are situated in Ugratara VDC. The total area of the CF in the VDC is 264.06 hector. The description about CF in Ugratara, Janagal VDC is mentioned in the table given below;

Table 4.9

No. of the CF in Janagal VDC

S.N.	Name of the Forest	Address (Ward No)	Area (hec)	No of HH	Handedover
1	Bhagaban Thumki Ban	Janagal-1	42	158	2047-7-13
2	Dhaneshwori Ban	Janagal-8	41	106	2048-1-19
3	Jwaladevi Ban	Janagal-4	30.19	101	2052-2-28
4	Sharadadevi Ban	Janagal-6	44	152	2052-2-28
5	Salle Ban	Janagal-5	81.25	285	2055-11-20
6	Balkumari Ban	Janagal-1,6	25.62	109	2058-3-22

Source : Samudahik Abhiyan,2008

In the table maintained above the biggest CF is Salle Ban, which covers 81.25 hectors of the land and Shardadevi Ban is the second biggest CF according to area. The smallest CF is Balkumari forest. The first CF of Ugratara VDC is Bhagawan Thumki Ban, which was handled over to the local community in 2047-7-13 (B.S).

4.4.10. Balkumari Ban

Bakkumari Ban is one of the community forests in Ugratar VDC. The hilly slope land with sandy loam soil looks very fertile. The total area of this CF is 25.62 hector. Total number of household is 109.

It was handed over in 2058/3/22 B.S. to the local community. After this provision impact has been seen in many sectors of local life. This forest lies between Mayoj Noodles Factory in the east, Apanga Hospital in the south, Dabur Nursary in the west and Araniko highway in the north respectively. The height of the area is 1480m from the sea level.

From the angle of management, it is well-managed by a group of women. Women's participation in the field of community development is of vital importance. A group of women in Ugratara VDC of Kavrepalanchowkdistrict have grabbed this opportunity by Balkumari Community Forestry.

CHAPTER V : IMPACT IVALUATION OF BALKUMARI COMMUNITY FORESTRY

5.1. Income

The main impact of Balkumari Ban has been seen in the income generating activities of the households, various aspects are concerned with income of the people. The main way of income of the people of this area is agriculture and animal husbandry, only some people are engaged in the government and private services. Before community forestry, the income rate of each household was Rs. 2400/- per month in average but now income has reached Rs. 3500/- to 4000/- per month. The main factor to increase income is vegetable and milk production. Some other income generating activities of people are given below in detail.

5.1.1. Agriculture

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

Table 5.1

Daily production of Vegetables in winter (In aggregate)

		Before CF	After CF
S.N	**Name of the vegetable**	**Quantity sold (In Doko)**	**Quantity sold (In Doko)**
1.	Cauliflower	5	20
2.	Rayo	10	25
3.	Chamsur Palungo	Self use	5
4.	Tomato	4	12
5.	Garlic & onion	3	15
6.	Radish & carrot	5	22
7.	Potato	10	30

Source: Field Survey,2009

The table above shows that, the vegetable production in the study area was just little more than for home consumption. The sale of cauliflower, turnip, Chamsure , Palungo, Tomato, Garlic, Onion was quite nominal. But, after the program implementation the aggregate sale of 40 respondents HHs has gradually been increased. It shows that the daily income of the people has increased.

Likewise, people produce vegetables in summer or rainy seasons also. People sell more than 60 baskets vegetable per day. Table given below shows the condition of vegetable produced in summer.

Table 5.2

Daily production of vegetables in summer (Aggreate)

		Before CF	After CF
S.N	**Name of the Vegetables**	**Quantity (In Doka)**	**Quantity(In Doka)**
1 .	Cucumber	Self Use	10
2 .	Pumpkin	5	22
3.	Bitter guard	Self Use	5

4.	Bins	2	7
5.	Ladies Finger	Self Use	3
6.	Long guard	1	3
7.	Potato	5	18

Source; Field Survey,2009

The average income of the household through vegetable in summer season is Rs.165 per day. In this way, people are getting advantage from community forest. Another important factor for agriculture is water supply. There is no problem of water at all today.

Mostly the household have tap at home. They are found using the overflow of drinking water in the vegetable land and other agricultural land. People are getting advantage from food crops as well.

Most of the farmers grow "Taichin & Mansuli" paddy in their field which is very good for bitten-rice too. Apart from this, people grow Maize, Potato, and Wheat etc. The table given below represents food crops produced in the study area.

Table 5.3

List of the major crops after and before the CF

		Before CF	After CF	Cultivated Land in Ropani	Changed Quantity in Muri
S.N	Crops	Quantity in Muri	Quality in Muri		
1.	Paddy	1000	1800	700	800
2.	Maize	500	1000	500	500
3.	Wheat	600	800	500	200
Total		2100	3600	1700	1500

Source: Field Survey,2009

This way agricultural productivity has supported to improve economic condition of the households of the study area.

5.1.2. Animal Husbandry

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

Table 5.4

Types and Number of Livestock reared in the study area

S.N.	Name of the Animals	Before CF		After CF	
		Number	Percentage	Number	Percentage
1	Buffalo	25	12.5	37	12.21
2	Cow	40	25	62	20.47
3	Goat	80	40	114	37.62
4	Pigs	12	6	15	4.95
5	Sheep	43	21.5	75	24.75
	Total	200	100	303	100

Sources: Field Survey,2009

The above maintained table shows that 20.47% cows and 12.21% buffaloes are domesticated to generate income by selling milk and milk production in the present context. Goat 37.62%, pigs 4.95% and sheep 41.75% are reared for the purpose of selling when they need cash. It also fulfills the required meat during festivals and other occasions because of animal husbandry. Because of animal husbandry, households are successful to produce milk in large scale. By selling milk daily in the city Banepa, they can fulfill their daily necessities.

5.2. Education and Transportation

The educational condition of the households is good. There is no discrimination among the son and daughter. Informal education for adult was, conducted in order to promote literacy rate. Out of 40 household respondents 76.9% of male were found literate and 23.1% illiterate. Similarly 57.1% female were literate and 42.9% illiterate. As a whole, there was 70% literate and only 30% illiterate respondent. Given figure exceeds the literacy status of user respondents.

Table 5.5

Literacy Status of Households

Literacy Category	Male	Percentage	Female	Percentage	Total	Percentage
Literate	20	76.9	8	57.1	28	70
Illiterate	6	23.1	6	42.9	12	30
Total	26	100	14	100	40	100

Source: Field Survey,2009

After the provision of community forest, the households decided to gravel 1 KM of road in ward No. 1. After gravelling the road, more than 200 households walking through this road daily are directly benefited. They had collected some amount in equal basis from all the households in order to complete the work. Moreover local people were actively participating for the work. This gave the people the sense of people's participation in development. They also learned that

the development works are not only the responsibility of government. Nowadays, heavy trucks also pass through the road easily during rainy seasons too. The better aspect of this work is that the school buses also can run along the road and the no. of kids in primary classes has been increased. Transportation facility has helped in decreasing the percentage of school leaving condition in primary classes.

Table 5.6

Enrollment in primary class before Community Forestry

S.N.	Age Group (Yrs)	Enrollment	Leaving School	Percentage
1	3-5	30	11	22.35
2	5-8	20	8	16
Total		50	11	38.35

Table 5.7

Enrollment in primary class After community Forestry

S.N.	Age Group (Yrs)	Enrollment	Leaving School	Percentage
1	3-5	32	5	7.14
2	5-8	38	4	5.71
Total		70	9	12.85

Source: Field Survey,2009

The primary school was far from the village so small children were not able to go to school. The table shows that the total percentage of school leaving without completing session was 38.35% before community forestry, but now the percent is 12.85 and the number of enrollment has reached 70 from 50 students.

5.3. Use of firewood and Alterative sources of Energy

The overall energy consumption in the study area is largely dominated by the use of traditional energy such as fuel wood, agricultural residence and animal waste. Before community forestry there was big problem of firewood. People were compelled to manage with animal waste and agricultural residue. Cow dung was being ash and the productivity of land was burning with dung cake. Some people those who had a bit better economic conditions were using Kerosene for cooking purpose. Now, community forest provides firewood for the users. Staying under the rules and regulations of the committee anyone can collect branches and dried plants as firewood. Because of incensement in livestock, some people have installed Bio-gas using animal's dung.

Table 5.8

Energy Consumption

S.N.	Types of Energy used (Fuel)	Before Community Forest		After Community Forest	
		Number of HHs	Percent	Number of HHs	Percent
1	Firewood	13	32.5	19	47.5
2	Agricultural Residue	11	27.5	10	25
3	Animal Waste	7	17.5	1	2.5
4	Kerosene	2	5	0	0
5	Electricity	2	5	1	2.5
6	Bio-gas	3	7.5	6	15
7	L.P. gas	2	5	3	7.5
	Total	40	100	40	100

Source: Field Survey,2009

The table shows that use of firewood reached 47.5% form 32.5%. The use of Agricultural residue has been declined and use of animal waste is decreased from 17.5% to 2.5% respectively. People are being attracted towards Bio-gas and L.P gas also. The user of Bio-gas and L.P. gas is 15% and 7.5% respectively.

5.4. Women Participation

The remarkable matter to be highlighted of Balkumari Community Forest is Women's Participation. Women participation has played vital role to strengthen social activities. Women forum for community development and Hatemalo Samudayik Samstha has been established in the village. Male are prohibited to drink alcohol and play card. The women group has decided to charge penalty against drunkard and Gamblers. So, some evil causing males have come into social track. Among 13 members of forest users' group committee all are female. Girls are getting chance to study in the schools.

Housewives work in the house as well as take part in other activities. They go to collect grass, firewood, fodder, bedding etc. for daily use. Some women go to read in adult education program and some are engaged in services also. Being run by the women, they are mainly focused on women status & empowerment activities. But, the CFUGC has founded a advisor's committee having three members for further advices, ideas & encouragement.

Table 5.9

Condition of Women Participation

S. N.	Condition of Female	Before CF		After CF	
		Number	Percent	Number	Percent
1	House wife	33	82.5	14	35
2	Adult Education	3	7.5	5	12.5
3	Members in FUG	0	0	13	32.5
4	Agricultural Training	2	5	4	10
5	Skill Development Training	1	2.5	2	5
6	Services	1	2.5	2	5
	Total	40	100	40	100

Source: Field Survey,2009

Australian project had conducted training on plant and management of forest. As well as ADRA (Adventist Deficiency & Relief Agency) Nepal had conducted program on literacy class within this CF. Women participation was found remarkable on those programs.

5.5. Rural Tourism

Many people from national and international level visit to study and research to Balkumari forest. Other tourists also visit the area. The area is pleasant, clear and clean. There is green curtain of nature everywhere. Many kinds of birds, animals and vegetation are other attractions of this area. From the height of Apanga Hospital Area, many places of the district can be viewed. Some Himalayan ranges also can be seen. So the place has highly potentiality of Rural Tourism. After the community forest many scholars, students, professors, Researchers, environment specialists, nature-lover etc from national and international level have visited the area. Before community forestry, tourists rarely visited the area.The figure shows the condition of Tourism:

Table 5.10

Tourists Visited in Balkumari CF

S.N.	Year (BS)	Foreign Tourist	Domestic Tourist	Total
1	2060	28	80	108
2	2061	30	95	125
3	2062	44	132	176
4	2063	47	185	232
5	2064	46	165	211
6	2065	50	178	228
Total		245	835	1080

Source: Field Survey,2009

From year 2060-2065, the condition of tourism looks very good. Every year, the numbers of internal & external tourists are increasing in positive way.

5.6. Awareness

Another impact of community Forestry in this area is full of awareness. Because of contact with different CF groups and other society people have learned civilization. Active participation can be seen in social services, health & hygiene, drinking water, women empowerment (education) women and Adult literacy etc. People are using contraceptive devices for family planning.

Table 5.11

State of Family Size among Respondents

S.N.	No. of Children	Number of Family (HHs)	Percentage
1	2	5	12.5
2	3	16	40
3	4	13	32.5
4	Above 4	6	15
Total		40	100

Source: Field Survey,2009

5.7. Occupation

In the study area, large number of population is engaged in agriculture. The physical and geographical setting is very suitable for agriculture. Community forest has played positive role in agricultural sector.

Source of water has been increased. Farmers can use much compost manure in the field. Very small number of population is getting opportunity of service in government and private offices. Small part covers the field of business. The occupational condition of the respondents is given below.

Table 5.12

The Condition of Occupation

Occupation	Number	Percentage
Agriculture	30	75
Govt. Service	5	12.5
Pvt. Service	2	5
Business	3	7.5
Total	40	100

Source: Field Survey,2009

5.8. Management System of FUGC

Different activities of FUGC has played vital role to strengthen concerned society. The main body of community forest is FUG. To increase the pace of FUG towards development, FUGC brings different package and programs. It also makes rules and regulations. FUGC works as R3 (Referee, Ruler and Rewarder). The present committee of FUG of Balkumari Community Forest is as follow;

1. Chairman – Kanchhi Khadka
2. Deputy Chairman – Khil Kumari Raut
3. Secretary – Yeshoda K.C.
4. Vice Secretary – Sanikanchhi K.C.
5. Cashier member – Sita Khatri
6. Members
    a. Kanchhi K.C.
    b. Kalpana Khadka
    c. Nirmala Khadka
    d. Bhagabati Khadka
    e. Chini Khadka
    f. Urmila Thapa
    g. Ganesh Maya Ranjit
    h. Tara Raut

Similarly, the Advisor's Committee of Balkumari Community Forest is as follows:

a. Jay Ram Khadka
b. Chandra Bahadur Khadka
c. Bhim Bahadur Raut

This committee calls meeting on first Saturday of every month and decides necessary objects and work.

5.9. Composition of FUG

There are 109 general users' households in this FUG. They are as follow;

Table 5.13

Composition of FUG

S.N.	Name of the Tole	VDC	No. of Household
1	Raut Tole	Ugratara	20
2	Khadka Gaun	Ugratara	34
3	Thapa Gaun	Ugratara	22
4	25 Kilo	Ugratara	16
5	Kangal Gaun	Ugratara	17
		Total	109

Source: Field Survey,2009

The main criteria of identifying users is based on who used forest regularly in the past, besides this location of house nearby the jungle is another point to be considered. The main users of this forest are the people of Ugratara VDC ward NO 1 & 6, some users are even from Banepa municipality and some other surrounding villages.

5.10. Population

The population of this place (ward No.1 & 6) is 1,465, where the number of male is 728 and female s 737.The users of this group are not only from Ugratara VDC Ward No. 1 & 6. There are some other users too. Including all total population of this user group is more than the population of the area. For detail information a table is presented below;

Table 514

Population of FUG

S.N.	Sex	Population	Percentage	Users	Percentage
1	Male	728	49.69	880	48.08
2	Female	737	50.31	950	51.92
	Total	1465	100	1830	100

Source: Field Visit,2009

5.11. Economic Activities of FUGC

Various activities are done to collect fund. The users are scattered in six different places. The number of users of this community forest is 1830, where the number of women is 950 and male is 880. Among these users following activities are conducted to collect money.

1. Every household has to pay Rs. 10/- every month at FUGC, This way Rs. 1090/- will be collected every month.
2. Users can collect fodder and bedding twice a year. The tax system is as follows:

Ticket/Person	Amount (Rs.)
1	2
2	5
Above 3	10

One ticket is valid for two days.

3. Unnecessary and useless Herbs and Shrubs clear and branch and dried trees distribution are conducted time to time. Users have to pay Rs. 6/- for one Bhari of Jhadi or Brach.
4. Fund collection by the punishment or penalty system is another way of generating income of FUG.

Table 5.15

Penalty System Conducted by FUG

S. N.	Crime	Unit Wise Punishment			Miscellenicious
		1st time	2nd time	3rd time	
1	Stealing fuel wood	100	200	500	
2	Stealing fodders and beddings	50	100	150	
3	Stealing Khawa and Killa	500	1000	2500	
4	Grazing Cattle	20	30	50	
5	Putting Fire				10,000
6	Encroachments/hunting				50,000
7	Committing mistake again and again may be sacked from FUG anytime				

Source: FUGC,2008

5.12. Yearly Income of FUGC

The income of this FUG is satisfactory. There is more potentiality of this forest towards fund collection. Given table shows the condition of income in the different years.

Table 5.16

Income of FUGC

S.N.	Years	Income (Rs)
1	2060	32,322
2	2061	38,881
3	2062	45,646
4	2063	56,352

5	2064	60,450
6	2065	63,935

Source: FUGC,2008

Income is found to spend in various social and development activities.

5.13. Construction Work

Balkumari CFUG has constructed many constructive works CFUG has nominated one forest Guard to look after the Jungle, who gets RS. 700 per month as salary. Salary is paid from the income & CFUGC. FUG has mobilized the income in many developmental works. FUG used some of the income to construct 2 km motorable road in Raut Tole. As well as in 3 km of road area, gravelling work was done. Users are sensitive in the protection of Jungle, so three kilometer long fire line to protect Jungle from fire was prepared. Likewise provision of drinking water, organizing trainings are some of the remarkable works done by CFUG.

5.14. Problems

Forest is a renewable resource which plays a predominant role in the all round development of the community. The villagers of Ugratara VDC have heavy dependence on forest resources in order to meet their requirements of fuel, fodder, grass, and bedding. The major problems regarding the community forest are problem of fire in forest due to carelessness, illegal tree cutting, selfishness of some users and so on. The respondent house holds have taken as a problem to pay tax as government's provision because government charges money but never works as commitment, spending as equal of the paid tax in return. This is also an problem of this FUG according to selected respondents. Encroachment and stealing are other problems of this area.

Many users claim that FUG is successful to preserve and utilize the forest. But it can clearly be seen that there is lack of proper E & M (Evaluation and Monitoring) by the side of concerned authority. In the beginning of the CF people

were very much interested towards community. The first three years of establishment was the golden age of the community forestry in this area, but now some of the users are losing their zeal. They have lack of interest in comparison of previous days. It is also abstract types of problem seen in the respondent.

Chapter VI : SUMMARY, CONCLUSION AND RECOMMENDATION

6.1. Summary of the findings

From the past experience of community forest management witnesses tremendous shifts in forest policies and procedures in Nepal. This runs parallel with the changing objectives of forest management from subsistance to sustainable economic transforms. The community forestry approach has been highly successful the protection of forests. The local user groups/committee is responsible for the control, protection and management of the forests. Community forest 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. Comparitively high economic status people are being user in most of the community forests. But, Balkumari Community Forestry is exception in this case.

The CFUG fund management has been increasingly focused on community development 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 irregularities has 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 favor to extract products for meeting their livelihood. Poor and disadvantaged groups suffer the most in this type of sharing mechanisms.

The main problem of community forestry is conflict and lack of coordination among the people because of the diverse ethnic groups, political ideological, gender and socio-economic pattern.

Forest provided a variety of goods and services to the local users mainly of Ugratara VDC Ward No. 1 & 6. The main products are fuel wood, fodder, timber and some medicinal herbs. 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 allocoted to the community development and forest development. People of community have used, improved variety of seeds for agriculture after the introducds of CF. Community forestry is a source of inspiration and vehicle for change at the village. Moreover, Balkumari Community Forestry has stood as an exaple of women's participation in community development too.

6.2. Conclusion

Forest is the life of rural people from each and every aspect. The Balkumari community Forest users group is also realizing this fact. The main conclusion of this study as regards to the impact of Balkumari community forest in Ugratara has been summarized below;

The users of Balkumari Community Forest have felt the need of protecting and Preserving community Forest because the main source of their livelihood is agriculture and livestock. They need water and manure for agriculture and grass, fodder, bedding for livestock. To join hand and mouth, they need firewood which is also obtained from the forest. So it seems that villagers protect this community forest as their own common property. Daily lives of the users have been easier than previous. They had to go far from the village to collect forest products before the establishment of this CF. Now they could save time and fuel. They can use their surplus time in other income generating activities.

Literacy percentage among users is found to be quite significant which helps to distribute the utilization forest resources with out disturbing the natural growth of the forest has been reduced step by step by adopting improved cooking stoves, Bio-gas and L.P. gas, which have helped to develop the forest. Forest use pattern has been seen more scientific. FUGC allocated the forest products by pruning and thinning (JHADI CHHATNE or PATLYAUNE, in local language). Every user has equal right to use forest products. Paying certain amount, anyone

can collect forest products according to rules and regulations. Because of good co-operation of FUGC, the pace of development looks good in the study area.

At last, it could be said that community forestry has played vital role in preservation and management of forest and to provide forest products to the villagers. The villagers' participation in different preservation activities of forest, seems good for the future of Community Forestry program. The people of this area are found positively influenced by community Forest.

6.3. Recommendations

Balkumari Community forestry in Ugratara VDC, ward No 1 & 6 has presented good performance but it has some draw backs, so I would like to recommend some points which may be useful to improve this forest in the future.

- The amount of forest products which would be sold to the users is very low, some amount can be increased in the present context, from which income generating activity will be supporting to infrastructural development in the concerned area.
- The FUGC is paying certain amount of the total income to the government but in return they are not getting any support. So E & M (Evaluation and Monitoring) should be done by the government not only in the paper but also in practice.
- The FUG would better take interest in NFTP (Non-forest Timber plant) especially in the herbal plant, which would be the big source of income.
- As Kavre District is suppose to be the biggest producer of milk (or dairy products) the FUGC should take interest in DALE GHANS production to further enhances the dairy products.
- The leaves and other forest saplings are only used for animal bedding the same can be used for briquette production as an alternative source of energy.
- As the Balkumari Community forest is getting denser day by day, it can be used as a basic conservation area to protect the locally available wild life.

- The community has a small stream within perennial source of water. Thus, there is great possibility of cardamom (Alainchi) production which can generate a great amount of income as a cash crop.
- The FUG is planning to regular cultivate Asparagus (Kurilo) as a cash crop to increase the source of income, which seems appropriate, should be implemented as soon as possible.
- The locally available herbs, which are unknown to the users should be identified and used or processed. For that the assistance of technical manpower should be provided by the concerned authority.

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QUESTIONNAIRES

Households Number: Head of the Household:

Respondent: Sex:

Name: Occupation:

Educational Status: Marital Status:

1. Family structure and status

a. Nuclear b. Joint c. Extended

Age	Sex	Education	Total	Remarks
0-9				
10-19				
20-29				
30-39				
40-49				
50-59				
60 above				

2. Land holding

Land holding	Khet	Bari	Pakho	Other
0-1				
2-4				
5-10				
11-20				
21-30				
31-40				
41-50				
50 Above				

3. Livestock

Animal	Number
Buffalo	
Cow	
Goat	
Sheep	

Pig

Hen/Cock

Other

4. ***Source of forest product***

a. Personal forest
b. Community forest
c. Other

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

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

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

S.N.	Major Crops	Production in Muri

7. ***Do you go to forest for supervision?*** Yes / No
8. ***If yes, how many times do you go to the forest in a month?***

   1, 2,3, 4, More than 4
9. ***How many times in a year the meeting convenes, normally?***

   1 2 3 4
10. ***How many forest products are provided by Balkumari FUG for one family in a year?***
11. ***Is there any misunderstanding in the past in the distribution of forest product?***
12. ***Do you think that community forestry is very useful?***
13. ***Do you attend the assembly?***
14. ***If yes why? If no why?***
15. ***Do you have to say any more about community forest?***
16. ***Do you send your children to school?***

a. Boy b. Girl c. Both

17. ***Are you satisfied with the progress of this forest?***
18. ***Do you use firewood for cooking?***
19. ***From where do you get fodder?***
    a. Community forestry
    b. Government Forest
    c. Private forest
20. ***How much fodders do you nee?***
21. ***Do you use any other alternative energy resources besides firewood?***

    Use type

    a. Electricity
    b. Kerosene
    c. Cow dung
    d. Dry Leaves
    e. Bio-gas
    f. Others
22. ***Do you sell firewood?*** If yes, where?
23. ***Use of manure (per annum for each crop)***

Crop	**Manure**	**Crop**	**Manure**
Paddy		Millet	
Wheat		Potato	
Maize		others	

24. ***From where did you get forest product before community forestry programmed?***
25. ***What kinds of forest product did you take from the place?***
26. ***Where do you take your livestock for grazing?***
27. ***What things do you feed to your animals?***
28. ***Who collects fodder and firewood?***
29. ***How do you make the compost manure?***
30. ***Do you think the forest should be protected?***
31. ***In your view what are the major advantages of the CF?***

    1.
    2.
    3.
    4.
    5.