CHAPTER ONE
INTRODUCTION

1.1   Background

Nepal is a land-locked and small country, geographically. It is located between two great nations, China and India. Nepal has different unique features, which are well known all over the world. Natural resources are the major component that reflect its beauty in front of rich countries. Natural resources (NR) are the fundamental assets of the nation, which can determine the degree of development. So its management system should be sustainable. Various elements of the natural resource are scattered all over the country. Forests are an important renewable NR. They contribute substantially to the economic development of a country by providing a variety of goods and services to the local people and industry. Importance of forest in Nepal is often expressed in the common slogan, "Hariyo Ban Nepal Ko Dhan", which literally means that green forests are the wealth of the nation. Nepal's forestry sector has been considered as a key contributor to the national development.

In many parts of the world, particularly in the developing countries, the rapid increase in human population and livestock has exerted heavy pressure on the remaining national forest to expand farmland as well as to open new area for livestock (Bhattari, 1990:10). The majority of the population in these countries depend on subsistence farming for their livelihood and there is no other easy alternative way for employment and income generation. The rate of forest depletion is thus increasing. In addition, controlling population growth to a desirable level has not been effective due to illiteracy and vicious circle of poverty of the communities. Forest is the major part of daily lives of rural people in Nepal. Rural communities are totally dependent on the forest product i.e. fuel wood, fodder, timber and other non-timber forest products (NTFPs). The forests resources have undoubtedly been utilized to satisfy the subsistence need of local people for a long time.

Nepal occupies a large part of the central Himalayan and its foothills. It is roughly rectangular in shape averaging about 885km.in length and 193km in width on an axis

running from west to northwest to east-southeast. The total area is 147181sq.km.covering 0.03 per cent of the world in area and 0.3 per cent of the Asian continent. The latitude ranges from 26^0 22' to 30^0 27' and in longitude from 80^0 4' to 88^0 12' east. The altitude of the country ranges from about 70m above sea level in the south-eastern Terai to 8848m at the summit of Mount Everest. Nepal is unique and varied in physographic zones at different altitudes. This causes wide diversity in natural resources. Nepal is rich in bio-diversity including flora and fauna.

The majority of the people depend on the agriculture and forest mainly, and are residing in the hilly and mountainous areas, and live in conditions of a very poor economy. To improve their economy, the Tenth Plan has adopted in special area development program. One of the main aims of the program is to generate the income through the sustainable utilization of naturally available resources in order to support the poverty alleviation. More than 43 per cent of the land must have been covered by forests for the sound environment, but in Nepal only 39.6 per cent of the land is covered by forests. This scenario is the outcome of unmanaged utilization of forest resources due to the poverty and corruption.

Topographically, Nepal can be divided into six roughly parallel zones, from south to north. These are Terai, Siwalik, the Mahabharat range, the middle hills valley, Himalayan range, Trans-Himalayan Valley and Mountain. The rural dwelling communities are among the poorest segments of the society, who are heavily dependent on the NR for the collection of food, fodder, fuel medicines, materials for shelter and sources of raw goods for cottage industries, which create the massive conflict among them. While population and forest exploitation levels have expanded dramatically since 2036 fundamental shifts in human resource management system have also played a part in shaping the fate of the forest. These changes in social approaches to forestry result from the competition of different paradigms there are various nature of conflict for the use of NR in local communities. Government administrators, rural communities, foresters, I/NGO leaders, development specialists may each work from the different perspective in their approaches to forest management, these changes over time. As a consequence in Nepal variety of forest management (FM) paradigms exist currently,

sometimes in direct conflict, at other times in a parallel existence or even in collaboration.

For the resolution of conflict in NRM, Nepal has adopted different strategies but none of them is completely implemented. Community forestry is a major strategy for the management of NR. By the mid-1970s, Nepal began to establish itself as one of the first nation in Asia to recognize the limitations of unilaterally managing public lands through government agencies, and the need for community involvement in forest management. Present study mainly focuses on forest management in a study area as a case study approach. Conflict resolution in forest resource management in Nepal is a growing concern among the different practitioners, decision makers and users. In recent years conflict over FRM in Nepal are increasing. They vary and depend on the nature and extent of the use of resources. Since historical times, as conflict arose mechanism to resolve them also were initiated. Forest resources occupy an important position among the natural resources in Nepal. This gave rise to the establishment of customary laws in the villages and communities. Recently, the participatory management is being adopted to resolve conflict on site. Similarly, legal provision is also being established at the national, regional and international levels. Some international and regional specimens of conflicts have also been presented with case in NRM.

Conflict over natural resources is developed not by one single factor. Rather, it is dependent on many others. Conflict is a part of development. Conflict usually brings positive results if it is properly handled. If the process of negotiation, facilitation and arbitration is not properly handled, there is always a risk of conflict arising within country and between people. In local areas of Nepal, resources are managed through the rules and regulations developed by the people or the government. Black's Law Dictionary (1991) states the meaning of conflicts as inconsistency or difference between the laws of different states or countries or a specific locality arising in the case of person who have acquired rights, incurred obligations, damages or made contracts within the territory as two or more Jurisdictions (Oli, 1998:1). The present study mainly concerns with conflicts in forest resource management in the study area.

Resolution is usually employed to denote the adoption of a motion the subject matter of which would not properly rules or formal documentation as action taken. Something less formal than ordinance, it is importance to note that conflict is a normal part of human interaction. In our society, usually conflict is seen as destructive. In many situation conflict can be constructive. Therefore, conflict resolution in NR is not an effort to eliminate conflict. It should, however, be an effort of using the conflict as a constructive means. With the exception of routine conflicts arising at local levels major conflicts actually occur when interest in resources sharing and attention for their solution are considered. Conflicts over the use of resources occur when resources are limited, more stakeholders get involved and the power of negotiations are not equal.

In local communities there are different was to show conflict under natural resource use pattern. Due to the lack of good employment opportunities, lack of adequate irrigation system, unequal land distribution, expose of local elite, unsystematic enrolment pattern in forest. Local people are unable to maintain their livelihood. So they are fully depend upon NR that's why there can be shown conflict among them. Forest resources are the major source of local people for the fulfilment their basic needs, because of they have no other opportunities to obtain their basic needs.

The worldwide recognition of conflict as a normal element in NR use and management has been followed by the recognization of the need to incorporate the management of conflict in our repertoire of strategies to support better resource management. In the very beginning, the importance of forest resources to rural communities and rural development has become abundantly clear. Through the world, rural communities rely on forests to supply fuel wood for their households. Increasingly as farm size and productivity decline under population pressure, the poor look more towards forest as a source of income or employment. People are central to the use and management of resources. People use resources for their livelihood. People need these resources for their wants. The community based NR in approach is an ongoing, collective initiative by the community to manage it's natural resources.

Forest management is defined as dealing with the overall administrative, economic, legal, social, technical and scientific aspects involved with the handling as

conservation and use of forest. It implies various degrees of declivarate human intervention ranging from action aimed at safeguarding and maintaining the forest ecosystem and it's function to favouring given socially or economically valuable species or groups of species for the improved production of goods and environmental service (FAO, 1991:34). Forest management always refers to sustainable forest management under which plantation, or forestation, conservation and consumption are properly integrated.

1.2   Statement of the Problem

Nepal is one of the poorest countries in the world. According to living standard survey 2061/62, 30.8 per cent of Nepalese people are below the poverty line. In this situation, available forest resources must be used appropriately in order to improve the living standard of present population as well as future generation. Poverty in Nepal, particularly in rural areas, is widespread and deeper in the most remote areas of the hills and mountains. The poorest households in these areas tend to have very small landholdings smaller than 0.5 ha., or not at all. There are also marginalized and very poor people of ethnic minorities and certain occupational caste groups. Rural poor have a particularly difficult time with work burden and low health in these areas. The forest resources (FR) presented promising and relatively untapped opportunities for increasing the income of the very poorest segments of the population. The forest sector plays a crucial role in the economic and social life of the Nepalese people. Subsequently, there are very few forests that are not under severe pressure from the nearby population, especially in the middle mountains and Terai where the population density is relatively high. This situation is further exacerbated by the fact thus forests are often scattered, in patches and with only 33 per cent of the biomass accessible for exploitation due to physical and geographical isolation, studies have shown that the sustainability of the subsistence farming system, in fact of growing human and livestock population and the deteriorating forest, is severely threatened (Dutta and Adhikari, 1998: 76).

Different programmes, policies, visions, missions, strategies, Acts and regulations have been lunched for the management of NRM throughout the governmental and non-governmental sectors, but none of them has obtained sound results, thus leaving some

conflicts among the local people. Nepalese have low per capital income in comparison with developed countries. This reality can be breakon through only by the sustainable management of forest resources. Nepal's economy largely depends on the use of NR base (NPC, 1998:44). The historical events are a strong determining factor in the present governance of NR and management of associated conflicts. Population pressure and poverty are said to be the main causes of NR conflict. Land, water and forests are the three most important resources for the survival of the vast majority of the Nepalese population (NPC, 1998:45). Therefore, conflicts in forest resource use is the main subject of this study.

This study will explain how such conflicts are managed in daily lives in rural Nepal. The important aspect of forest development is to identify the used variables, which have had an inverse impact due to the political instability, overambition in plan formulation, weak policy and implementation of plans and programs, lack of income generating activities, poverty as well as lack of irrigation system in agriculture production. The people are falling under the trap of poverty. In such a condition, their living sources are forest resources. This study tries to show how knowledge about the physical environment and human impacts on it can be correlated to formulate ideas for sustainable management of forests in the study area.

Hence, answers to the following questions are to be looked for:

a. What are the existing disputes among the forest user groups (FUGs) in the study area?
b. Why do these disputes occur among those FUGs?
c. How do these disputes arise?
d. How are the FUGs trying to manage conflicts?
e. What factors are required for the resolution of the conflicts?

1.3   Objectives of the Study

The overall objective of this study was to understand and analyse the dynamics of conflicts and their management in nature resource use. The specific objectives were:

a. To assess the contribution of forest resources in local community;
b. To find out the major causes of conflicts in forest management and
c. To examine the local people's ideas relating to conflict management in forestry.

1.4 Importance of the Study

Nepal is small in size but it is rich in bio-diversity including flora and fauna, which play a significance role in the countries economic development. Forest resources are the major element of natural resources. Majority of Nepalese people fulfill their basic needs through forest resources. In developing countries like Nepal, forest resources play vital role in balance of payment. Various management approaches have been adopted to uplift socio-economic standard at local people through forest resources by motivations their active participation in conservation. Among the least developed countries of the world, Nepal's economic growth has been hampered by the lack of commitment, economic opportunities and infrastructure. Growing poverty and environmental deterioration has further exacerbated the problems. Forest plays an important role in the maintenance of ecological balance. This study also attempts to develop an alternative approach to conflict management on the basis of understanding the existing causes of NR related conflicts and their resolution practices. The contribution of this alternative approach will be promoting collaboration among actors involved in NRM, in managing conflict.

In the overall context of sustainable development of resources, reduction population growth, reduction in poverty and better management of forest resources are urgently need. The overall significant at this study is to reduce the conflict among the local people in the name of use of natural resources on the one hand, to provide the knowledge reasonable use of forest resources in order to improve living standard of present as well a future generation on the other. In the context of Nepalese scenario the forest resources have supplied almost the forest resources have supplied 75.78 per cent energy. In this position the result had been showing rapidly declining forest resources. So in this study contribute to sustainable management of forest recourses of the study area. Similarly, due to the political instability, mass poverty, illiteracy, overgrazing, peoples' war, unexpectedly large amount of firewood, use and lack of awareness, the forest resources have been decling day by day. The solution to these problems are urgently needed. Thus, this study may provide some solutions in this.
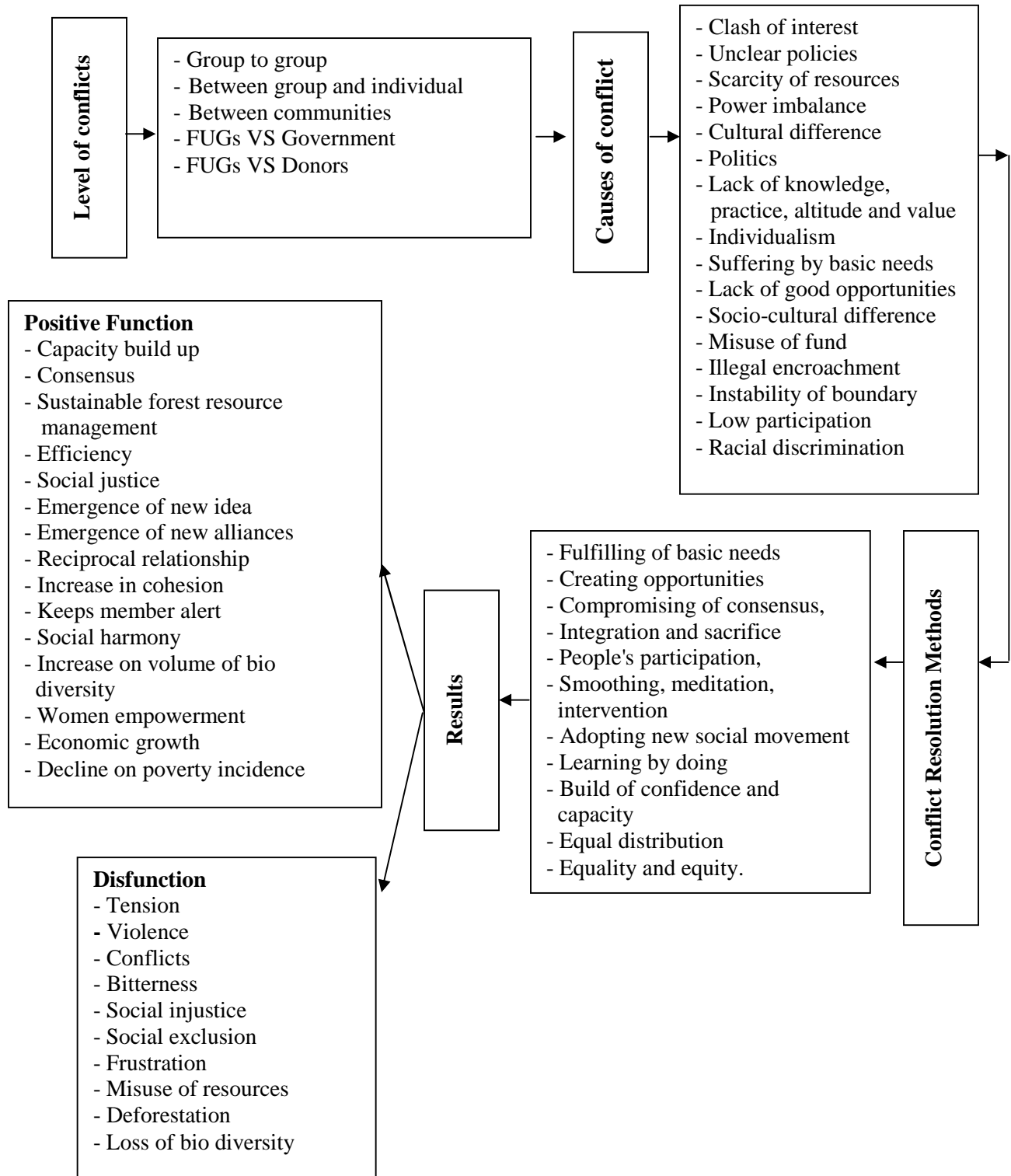
Finally, it is hoped that, the findings of this study would help to make policy for forest users in forest management activities, and also help the agencies like, I/NGOs, GOs, CBOs who want to improve the forest management related activities.

1.5   Conceptual Framework of the Study

The basis of this research study is mainly the SFM system adopted by local people. The major foundation of any research in regard to sound policy framework has clear objectives and goals that will guide forest management into the present as well as future. A sound policy framework should exist in writing and make explicit its purpose and how benefits are to be distributed among actors and the public. A sound frame also established the rights and responsibilities of actors and fair mechanism for dealing with conflict. It also creates confidence and security in investors, other economic actors, both government and non-government constituencies, and local communities. The main elements of a forestry policy framework should be as follows:

National goals $\rightarrow$ resources management principles $\rightarrow$ strategic objectives $\rightarrow$ priorities for actions

Figure 1: The Conceptual Framework

| Level of conflicts | - Group to group
- Between group and individual
- Between communities
- FUGs VS Government
- FUGs VS Donors | Causes of conflict | - Clash of interest
- Unclear policies
- Scarcity of resources
- Power imbalance
- Cultural difference
- Politics
- Lack of knowledge, practice, altitude and value
- Individualism
- Suffering by basic needs
- Lack of good opportunities
- Socio-cultural difference
- Misuse of fund
- Illegal encroachment
- Instability of boundary
- Low participation
- Racial discrimination |

Positive Function
- Capacity build up
- Consensus
- Sustainable forest resource management
- Efficiency
- Social justice
- Emergence of new idea
- Emergence of new alliances
- Reciprocal relationship
- Increase in cohesion
- Keeps member alert
- Social harmony
- Increase on volume of bio diversity
- Women empowerment
- Economic growth
- Decline on poverty incidence

Results

- Fulfilling of basic needs
- Creating opportunities
- Compromising of consensus,
- Integration and sacrifice
- People's participation,
- Smoothing, meditation, intervention
- Adopting new social movement
- Learning by doing
- Build of confidence and capacity
- Equal distribution
- Equality and equity.

Conflict Resolution Methods

Disfunction
- Tension
- Violence
- Conflicts
- Bitterness
- Social injustice
- Social exclusion
- Frustration
- Misuse of resources
- Deforestation
- Loss of bio diversity

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Different actors are involved in conflicts. These conflicts occur at six levels e.g. with groups, between groups and individual, between communities between FUGs and government, and between individuals. Various causes such as power imbalance, clash of interest, change in policies and laws, social unjust system, illegal encroachments, lack of knowledge, practice and attitude, cultural differences, and others create conflicts. These conflicts can be deals with different conflict resolving mechanisms such as fulfillment of basic needs, create any kinds of opportunities, educating, mediation, comprising of consensus, integration and sacrifice, peoples participation smoothing, adapting new social movement, optimum allocation of resources task force formation and so forth. Conflicts have negative and positive impacts. Positive impacts can be the emergence of new idea or alliances capacity build up, efficiency, social justice, reciprocal relationship, social harmony, bio-diversity conservation, women empowerment economic growth, while negative may create tension, better-ness, violence, inconsistency, disputes, social exclusion, frustration, misuse of resources, deforestation and latter may result collapse of FUG.

1.6   Limitation of the Study

Due to the various constraints, it is not a comprehensive study and it focuses to analyse certain aspects of NRM, especially forest resources management at Panchakhal in Kavre district. Research conducted in a specific area is supposed to be scientific and systematic. So the study will be very specific like a case study.

1.7   Organization of the Study

This research has been organized in six chapters. Chapter-one deals with background of the study, statement of the problem, objectives of the study, conceptual framework, significance of the study, limitation of the study. Chapter-two gives review of literature that are organized in to various topics: general overview deforestation, community forestry as effective strategy for SFM, meaning, nature and causes of conflict method of conflict and so on. Chapter-three presents research methodology including various methods of data collection and analysis. The fourth chapter describes introduction of the study area. The fifth chapter is concentrated analysis of data various perspective. Finally the six chapter contains summary, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1   General Overview

Forestry program mostly focuses on policy and institutional reforms for the management of forests on a sustainable basis. Participants learn how the countries can sustain indigenous forests and reduce the rate of deforestation, preserve genetic resources and maintain a flow of timbre and NTFPs (W.B, 1977:155). Economic reform can benefit the environment and they are even morel helpful when backed by strong environmental financing mechanisms. Liberalization restructuring, and foreign investment can help correct perverse incentives and accelerate the adoption of modern appropriate technologies. However market incentives by themselves do not ensure environmentally sustainable growth. Strict monitoring and enforcement of environmental regulations are needed (Norsworthy, 2000: 64).

Goods and services supplied by our living and non-living environment to meet human needs and wants are the NRs Development has become possible in the past through the extensive use of NR and dramatic changes in land use. With the increase in population and the increase in the standard of living, NR depleted very fast. Further exploitation of resources is likely to be unsustainable. Instead of NR exploitation we therefore now look for ways and means for ensuring sustainable use of NR.

Conflict management is making progress. A part of improving the conflict situation, progress may be developed in mutual gains learning, achieving agreement, laying foundations for further negotiation or fully resolving conflict. Progress is a way of thinking about a conflict situation that recognizes that conflict is inevitable and ongoing and management of this conflict comes from continual improvement in areas of substance and relationship (Daniels and Walker 1997:35). The importance of Conflict Management (CM) in NR and its linkages with other social issues are directly connected with the conceptualization of conflict by communities and their response to it. This in turn shapes the ideological basis for the conduct, practices and behaviour of people in daily life. The fast changing socio-political situation and the pace of modernization in Nepal have given new direction to NRM and the management of associated conflict (Upreti, 2001:3).

Forest is the important resource for the economic development of Nepal. Conflict is common in the use and management of the forest resource. Therefore, management of conflict is crucial to improve the performance of NRM and to achieve sustainable use of resources. Forest resources are one of the major resources directly contributing to the survival of rural people in Nepal (Upreti, 2001:6). Forest resources directly fulfill forest related subsistence needs of women poor and backward people as well as commercial needs of well-of people. They are providing inputs for agriculture, livestock, and supply medicinal herbs, timber and non- timber forest products. Much of the agricultural production system of the country is directly and indirectly based on forest resources (NPC, 1998:266). However, political and commercial interests severally treat the Nepalese forests. In 1964 forests covered more than 45 per cent of the total area of the country, this being reduced to 29 per cent by 1998 (NPC, 1998:290).

The Master Plan for the Forestry Sector (MPFS) 1989 planned to meet people's basic needs for fuel wood, timber, fodder, and other forest products on a sustained basis and to promote people's participation in forestry resources' development, management and utilization (HMG/N/1989).

It is important to note that all NR-related conflicts are created in differentiated and specialized local environments across the country. The specific NR-related conflict of the Terai is different from those of steep hills and mountains. However more common problems of both areas are resources degradation, conflict about access, rights and obligations fair distribution, maintenance and benefit sharing.

There are two types of scarcity of NR: Absolute resource scarcity and relative resource scarcity. Absolute occurs when supplies of resources cannot meet demand. Relative occurs when there are enough of resources to meet the demand but its distribution is unbalanced. (Lekhak and Lekhak, 2003:1). The better protection and management of the forest resources for the benefit of the people, forest of Nepal were nationalized in 1957. Some of the communities where forest products were already scarce continued managing forests and whereas others, who thought forests to have been more freed from communal control, caused more destruction (Wallace, 1988:51). Working Plans For Several Terai Forests were drawn during 1959 but were not implemented

because of the government's resettlement program, which overlapped with these forests (Bhattarai, 1990:67).

Forest management should maintain and enhance forest quality; and look beyond the stand to encompass the much larger landscape so that biodiversity and ecological processes are maintained. When trees are cut the rotation period should follow the longer natural cycle of forest rather than a shorter financial cycle. Sustainable forest management (SFM) seeks to mirror me condition in natural forests that are heterogeneous. The social dimension is the most challenging one. Because people who live in or near distance from it is demanding to participate in decisions on how forests are managed. Instead of managing for the people we now manage it with people.

SFM requires leadership first to empower the villagers either from inside or outside. SFM is providing valuable examples of collective community forest management. Where homogeneity leadership voluntarism indigenous knowledge organizational innovation and institutes real acclivities play an important role in decentralized program of rural development (Abramovitz, 1998:159).

Various endogenous and exogenous factors such as population growth, globalization of market, environmental and technological changes are imposing new conflict on the NR sector. Many large and small NRM projects implemented by different agencies are introducing new conflicts as well as having various negative impacts on society. There are several factors causing conflict in NR. Conflict can arise if the new NRM policy of the government contradicts with local cultural practice. The economic motive of people to acquire more from the existing natural resources on a competitive basis also leads to conflict. Conflict is also growing due to the contradiction between environmental and economic interests. Changes in historical use patterns in NR can bring conflict into a community. Social dimension also create the conflict on NR. Social dimension refers to the more human related aspects of negotiations, such as knowledge, technology, institutions and forums. In the study of conflict it is important to understand the role of the human dimension in NR. Therefore, different dimensions of NR are essential for a better understanding of conflict in NR and their management.

Many environmental problems stem from poverty often contributing to downward spiral in which Poverty exacerbates environmental degradation and environmental degradation exacerbates poverty. In Poor rural area for example there are close link among high infant mortality, high fertility, high population growth and extensive deforestation are peasants fell tropical forests for firewood and new farmland (Lekhak, 2003:123). Now, there is a widespread public concern about the need to maintain the ecological balance of environment the natural gene pool and conserve the natural heritage of humankind. The natural environment is on important resources which if properly managed, generates its own social and economic benefits.

Community involvement in forest management (CIFM) has evolved in the last few years to raise, awareness of the roles that communities play in many place around the world in the sustainable management of forest. The degree to which CIFM is recognized by governments and in integrated in the management goals varies widely. Presently much of the world's forest are used by local communities whose interactions are mediated through institutions that range from highly traditional to very modern and whose legal control ranges from nothing to absolute. Because CFM is often based on local organizations that are frequently unregistered and fall outside formal Policies and prescriptions local forest -dependent inhabitants have been the hidden component of management in the forestry sector.

Forest produce immense quantities of fuel wood to supply house had with cooking and heating materials as well as providing wood and charchol to hundreds of thousands of small industries for agricultural system providing fodder for livestock tock and green manure for farmer's fields. Forests provide important service in enhancing water supplies controlling erosion and moderating microclimates. In upland areas where erosion rapidly depletes the bare agricultural soils only through the transfer of nutrients from forests can the productivity of the land be sustained. In many parts of subcontinent forests are key elements of local watersheds and catchment areas slowing the run-off during periods of heavy rain full and facilitating the recharge of shallow aquifers. Local

water sources whether shallow wells spring or streams provide the domestic water critical to the survival of rural families (IUCN, 2000: 2).

Nepal is a world leader in the field of CF. By the mid-1970s, Nepal began establishing itself as one of the first nations in Asia to recognize the limitation of unilaterally managing public lands through government agencies and the need for community involvement in forest management. With the financing and technical support provided by the World Bank (WB) and a diverse group of bi-lateral donors and NGOs the government of Nepal was able to initiate community forestry pilot projects in many of the country's watershed. (IUCN, 2000:57). Community forestry management system is a new scheme for the forest resource management in Nepal. Community management of forest has changed the concept of community life. Villagers do not think in terms of personal benefits. Rather, they think in terms of collective benefits. They spend money earned from the forest in community development work like widening of trails roads and supplying potable water (IUCN, 2000:67).

South Asia is moving through a historic reconsideration of its approaches to forest management. The development paradigm of the post world war second era were premised upon the assumption the economic growth would relieve pressures on the natural environment as societies moved from primary modes of natural resource exploitation, to industrial manufacturing and post industrial technologies. In past, due to the extraordinary patterns of demographic expansion occurring over the past fifty years, direct dependence on water, soil and forest resources has increased rather than decreased. Industrial demands for forest products continue to grow, while productivity is declining.

Human beings are facing the several crisis in the present year. Rapid deforestation is occurring exactly at a time when much of the region is facing a chronic and growing water shortage that has already reached frightening proportions. The per capita area of land and forest in developing countries is the lowest in the world an extremely precarious situation even under the best of circumstances. Basically more than half the entire human race lived in

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developing countries. But they have no adequate land as well as forest resources for achieving their basic needs.

Without adequate forests resources clean environment can't be generated. Healthy mind in a healthy body in a healthy environment can achieve the goals of SFM. For these reasons, as well as for a host of other social, economic aesthetic, environmental and spiritual purposes, we have, in recent years, begun adopting the long overdue policy of SFM. All people depend on the forests. So its management system also should be strong. So it is recognized that SFM means more than simply sustained yields of timber. It means the management of forests for a wide range of goods and services and it involves a complex array of social and economic issues. We must keep in mind, however, that forests are much more than just timber. They provide a multitude of non-wood products and services with which you are all familiar, including watershed protection, carbon sequestration and climate regulation. A successful strategy for sustained socio-economic development must ensure that the people, especially the rural poor, are empowered to participate in the kind of growth that degrades neither humankind nor nature.

The classical roots of 'SFM' can be traced to the concept of sustained yield forestry and its main principle of "Balancing the volume (of timeber) harvested against the growth predicated from regeneration and planting" (FAO, 1995:14). Specialists agree that the sustainable forest management of forests for the production of wood is based on a deceptively simple principle. All that needs to be done is to harvest the wood at an average annual rate not greater than the forest in question can grow it. Some however, now question the overall sustainability of this approach. SFM is now widely acknowledged to mean much more than simply the sustained production of wood (FAO, 1995:17).

2.2   Deforestation and Natural Resource Degradation

The degradation and deforestation of natural forest in many tropical countries of the Asia and pacific region have accelerated and are increasingly eroding the forestlands. Degradation and deforestation are closely linked.

Degradation of forest ecosystems represents a more gradual reduction of biomass, productive capacity and biodiversity. Continued degradation of forest resources will ultimately result in deforestation. Although the extent of degraded forest lands and the level of degradation are difficult to quantify, available figures indicate that degradation is even more widespread than deforestation. Most deforestation in the region's tropical countries is attributable to the expansion of agriculture through shifting cultivation, grazing, cultivation of cash crops, colonization, and transmigration programs. Other direct causes of deforestation are infrastructure development, such as hydroelectric dams, roads, housing, industrial complexes and harbors, and war. Deforestation only takes place when logged over areas are affected by other human activities. Fires set by shifting cultivations and clearing by farmers account for actual deforestation. Logging roads provide access to forest areas and therefore accelerated deforestation.

In addition to the immediate causes of deforestation and degradation, it is essential to recognize the underlying forces driving tropical forest loss and deterioration. These include:

- Political instability;
- Debt burdens forcing governments to look for quick revenues at the expense of sustainable management;
- Poverty in the rural area, including uneven distribution of land;
- Excessive growth of both human and livestock populations beyond the carrying capacity of the natural or man-made ecosystems;
- Weak institutional capabilities in forestry administration; and
- Lack of adequate education, research and extension (FAO, 1995:19).

Forest is a complex renewable natural resource. The complexity is due to its two important characteristics. The first is that a forest is composed of a number of ecosystem components such as land, soil, water, flora and fauna, none of which is simple in nature. The second characteristic is that these components interact among themselves as well as with the physio-environmental and socio-

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economic system in a very complex manner. We also need to remind ourselves that forest and natural vegetations are found even in the extremes of climatic, edaphic and physiographic conditions in various part of the earth. Even in a small country like Nepal there are many kinds of forests and natural vegetations ranging from tropical through subtropical to temperate and alpine types all due to the altitudinal differences ranging from about 150 meters above sea level in the south to the high Himalayas ranges in the north. In spite of their location or type each forest ecosystem serves three basic functions i.e. protective, regulative and productive (Dahal, 1998: 44).

The vital causes of forest degradation are over exploitation for full wood, particular around cities and along roads, overgrazing and continual bush fires. In case of Nepal, poverty, unemployment illiteracy, corruption, re-settlement program, open border and political instability are the major causes of deforestation. Though know that environmental degradation and resource depletion are widespread problems in poor as rich economies Nepal's deforestation is also largely due to the country's poor economic performance. In this context, an economic model was a power tool for understanding the problem of deforestation in Nepal (Manandhar, 1993:11).

The lack of improvement in agrarian resources technology, and employment opportunities, and also a decline in area of farming land, through family separation, has been responsible for private and public grass-lands being converted into farm fields in a western hill village (Pandey, 1992:73). This also has contributed to the depletion of forest-lands. Social consequences of deforestation are reflected in fuel wood and fodder scarcity and the additional burden on women in rural areas. Due to the world's repeated oil crisis, the Nepalese people have to depend on alternative energy sources such as biomass, solar energy, or hydro-power for cooking purposes. However these sources of energy are expensive and unobtainable for most villagers who can afford only wood fuel.

The forest sector has always been associated with diverse factors like political, social, economic and demographic hanger, and the land use in relation to these factors over the centuries. Historical research can be of considerable value in making decisions in forest management. For hundreds of years, the exploitation of the forests has become an established phenomena to provide food, wood fuel, fodder and farmland (Manandhar, 1993:15, 17).

2.3   Meaning of Forest Resource Management

FM in the broadest sense deals with the overall administrative, economic, legal, social, technical, and scientific aspects involved in the conservation and use of forests. It implies various degrees of deliberate human intervention, ranging from action aimed at safeguarding and maintaining the forest ecosystem and its functions to favoring given socially or economically valuable species or group of species for the improved production of goods and environmental services.

Thus FM can be defined as "deciding what one wishes to do with a forest, taking into account what one can do with it and deducing what one should do with it". In other words, it is the designing and carrying out a set of activities for conserving and using a forest, based on a set of objectives and on the physical and socio-economic context (FAO, 2001:33). FM for most purpose entitles the controlled and regulated harvesting in the forests themselves of many goods and services, combined with silviculture and protective measures to sustain or increase the social, ecological, and economic value of subsequent stands. Forest ecosystems are managed for a variety of objectives related to the many goods and services.

Deciding which objectives have priority in multipurpose management may be needed to facilitate the choice between the conflicting demand made on forests. Where there are several objectives within the same area, one main objective must be given priority over the others. To achieve the targeted objective FM system should be very effectively. FM is an intention and is conditioned by the local physical, social and economic parameters. The number

and kind of activities put into practice to achieve this intention in a given forest arid are determined by these parameters obviously they will vary considerably from one place to another (FAO, 2001: 34).

Forest resources are core resources among the NR. To maintain the ecological balance its managing system should be very strongly. In general, FM means systematic arrangement of various activities, which are directly concerted with its nature. Community forestry is unique strategy for the FM system. People's participation, their interest should be active over NR. Managing, protecting, mobilizing, consuming and other activities of forest resources should be depend on local people. Rapid population growth unemployment, poverty, illiteracy, lack of awareness are the factors affecting the deforestation. So these factors may changes in positive direction on a time. Healthy mind in a healthy body in a healthy environment can achieve the goals of sustainable forest management scheme.

The concept of forest management cannot be separated from that of sustainability. Sustainability is not a new concept of foresters. The sustained yield, principally or exclusively, of wood and in some cases of other locally important products was the main aim of forest management. Responsibility for the management of forests and trees generally should be clearly identified, thought he competing interests of land and other resources must be reconciled.

The evolution of ideas on SFM may be illustrated by some quotations from the development in the tropics. From its very inception, the committee gave forest management high priority. Some recommendations are as like:

– In view of the difficulties inherent in the preparation of complete management plans, countries draw up 'minimum plans'.
– Wherever possible, these plans include the development of touristic and other indirect values of the forests in accordance with the principle of multiple purpose forest use.
– Forestry research should be fostered in those sectors where information is insufficient for management plans: growth rate of species and of stands,

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species characteristics, regeneration techniques utilizing the logging operations and especially (FAO, 2001:35).

The management of common forest resources was well developed in England by the middle ages with clearly defined use and ownership rights and such rights already dated from time immemorial (Gilmour and Fisher, 1991:121).

In order to enhance contribution of forestry sector to the national economy it has become necessary to make FM. Participatory, simple and effective by mitigating the problems of degradation of forest, soil erosion and decrease in bio diversity poverty and unemployment. It has been clearly felt that forest sector should play a very vital role in the social development by enlisting participation of women poor and backward people in conserving the forest and wild animals (NPC, 2002-2007:180). In order to exploit the opportunities from the forest, the existing challenges will be met by controlling the encroachment of the forest area and by effective management of forest (NPC, 2002-2007:185).

2.4   Community Forestry as a Strategy of Sustainable Forest Management

Nepal is a world leader in the field of community forestry. By the mid 1970s, Nepal began establishing itself as one of the first nations in Asia to recognize the limitation of unilaterally managing public lands through government agencies, and the need for community involvement in forest management. With financing and technical support provided by the World Bank and a diverse group of bi-lateral donors and NGOs, the government of Nepal was able to initiate community forestry pilot project in many of the country's watershed. The 1980s were a period of extensive experimentation with operational strategies for farm forestry, reforestation, nursery establishment, extension, training and community organizing. Different donor agencies were eager to establish field projects. Each project, through interactions between technical support staff, local foresters and communities, designed unique approaches to training, subsidy and credit provision, and technical extension (IUCN, 2000:57).

Community forestry strategies gained greater definition from the mid 1970s on wards. In 1975 the food and agriculture organization's (FAO) forestry Division established a community forestry development project that was later integrated on a new division with the department of forests. Various NGOs began working on CFM projects in growing numbers after a three day meeting sponsored by the government in 1875 turned into a 23 day marathon, with foresters participating from all over Nepal. The government of Nepal is establishing different rules, regulations, policies, Acts and so forth in the name of community forest management. Many of these policy shifts were incorporated in the 1989 Master Plan For The Forestry Sector (MPFS). Some key elements included in the Master Plan were:

*   Meeting community needs as a first priority
*   Empowering forest users as managers
*   Emphasing extension as the primary role of forestry field staff
*   Hundred per cent of benefit share to communities.

The 1990 constitution directly emphasizes the principles of community forest management including the fundamental rights of Nepali citizens to utilize local natural resources. Most of the FUGs have got the over confidence, CF is a major strategy of FM as well as instrument of survival of local people. So here views of some member of FUGs such as Sita Chhetri, a member of Jaykot FUG of Pokhara area, could be presented: "The forest means everything to us. It gives us fodder, fuel wood and leaf litter. It's a perfect home. We are seeing wildlife in the forest after a gap of two decades" (IUCN, 2000:67).

Forestry is not about trees; it is about women and men, poor and rich. And it is about trees only insofar as trees can serve the needs of women and men, poor and rich (Hobley, 1990:336). The perception, that community participation is inevitable in forest management and development, has gained widespread recognition in most parts of the world. The local community has the basic knowledge of factors responsible for the degradation of natural resources and can apply indigenous means of protection and management. The efforts of the locals

have seen successful in maintaining a sustainable supply of forest resources, and arresting the deforestation process in many area of the world. The various FUGs in different districts of Nepal have provided evidence of the flourishing indigenous method of forest protection and management. In Nepal the effectiveness of the CFM system demands the development of a management plan in consultation with a involvement of the user groups of forest resources by integrating this system to the overall rural environment development.

Community Forestry (CF) has evolved as one of the major components of Nepal's forest development strategy. The program is the most middle hill through the participation of rural communities in forestry. Rural communities are the managers of the government's forests because they have right and responsibility to manage, conserve and use the forest resources. CF was introduced in Nepal in 1978. CF advocates strong community participation, bottom up planning and sustainable use of forest resources. These programs have been operating in all districts by October 15, 2003. Nearly 12,822 FUGs are managing 1440,185 ha of community forestry, which comprises 24 per cent of the country's total forest areas (CPFD, 2003:29). In Nepal, two categories of forests are found based on ownership. Those are private and national forest. National forest again has five categories namely, government-managed forest, protected forest, community forest, religious forest and leasehold forest.

CF has been defined as "the control, protection and management of local forest by local communities known as user groups". That forest managed by a group of local people for their own benefit known as CF The main objective of the CF is to achieve sustainable forest resources by converting accessible national forests into CF in stages.

There were no strict rules and regulations about the forest before 1957. The local people uses forest products without any restriction in that time but somewhere some religious management committee controlled over the forest and its products. Because of the lack of strict rules and regulations, government nationalized forest to control over forest and to control the increasing rate of

deforestation as an effort. To solve the increasing serious problem of deforestation, in 1957, the government nationalized all forest to preview the destruction of national wealth to nationalize private forests for their adequate protection. Unfortunately the nationalized forest became unsuccessful. Due to the nationalization of forest, the local people could not feel forest as their own. They could not get any responsibilities and authorities of forest, so they could not feel their own properties. As a result, the forest depletion was increased rapidly. This scenario shows the negative result in forest management system. The lack as well as difficulties of supervision from center, bureaucratic practices, the lack of ownership feeling among the people who were the direct beneficiaries of the forest led to the failure of the nationalizing policy.

After the failure of Forest Act 1957 during the decades of 1970, CF system has been introduced. The specific feature of CF is that the local organization sponsored by government is to manage and conserve forests. There is the direct link between community development and forest conservation. CF. is a viable strategy for arresting the rate of land degradation and fostering the return of species to previously degraded habits in Nepal. Community forest can yield improvement in both rural welfare and forest condition because the managers of the resources and its local users are same entity. The prime policy of CF is to develop and manage forest resources through the active participation of individuals and communities to meet their needs. The main strategy of the CF program is to phase handling over all accessible hill forests to the communities to the extent that they are able and willing to manage them.

The community forestry policy has provided user right to the users independently. CF is primarily for the benefit of villagers. Equity in benefit-sharing encourages the individual to work effectively in the sustainability of the forest management. When taking the CF policy, forest conservation and managing system shown very selectively. The rate of declining of forest resources is reduce. So the community forestry program is to be effective strategy for sustainable forest management.

Users are the main pillars for success in CF Traditionally users were portrayed as destroyers rather than managers of forests, and their attempts to meet basic product needs from the CF were frowned upon. However, more than 90 per cent of users, and 100 per cent in the case of users from rural areas depend on the CF for their forest products needs (NUKCFP, 1995:3). For them there are no alternatives. Since the nationalization of forests in 1957 forests have been desire owned by the DFO, but local users are the detector managers of forests. CF is being implemented under an assumption that of users are provided with usufruct rights, they will be able to manage forests in a sustainable manner. However there is need for safeguarding forests from the potential for destruction caused by political influence and upheavals, commercialization and take over by vested interests. One mechanism for this is the development of "user consensus in the formulation of operational plans (OPs)." Reaching consensus is not a simple task; but it is necessary. For only when users feel that the CF Constitution and OP are prepared with their consensus and properly reflect their voices will they "own" the CF and become committed to its development (NUKCFP, 1995:3).

2.5   Meaning and Nature of Conflict

Conflict is the modern trend in the society. There is a transitional social change in the Nepalese society. In recent years, conflicts over NRM in Nepal are increasing, not only in the forest sector but also in political social, economic, cultural spheres and so on. Conflict is a part of the process of development. Conflict usually brings positive results if it is properly handled. If the process of negotiation, management facilitation and arbitration is not properly handled there is always a risk of conflicts arising within country and between people.

In general conflict means one dominate to another on the basis of consumption, production, exchange and distribution of goods and services. Conflict defines as inconsistency, debate, variant among the peoples and countries in the society. Hence, conflict is the part of jurisprudence arising from the diversities of the laws of different jurisdiction in their application to right and

remedies. The nature of conflict in NRM can found different. In the context of Nepal, the volume of conflict upon forest resources is very high.

Due to the lack of basic need, good employment opportunities, poverty, illiteracy uneven geographical condition, unequal distribution of land, corruption, open border, lack of sound rules and regulation, act and lack of supervision and monitoring conflict over NR has been rapidly increase still the 1970s decades. But, now this conflict has reduced more or less in the name of CF In the local areas of Nepal, resources are managed through the rules and regulations developed by the people or the government. There are so many conflicts all over the country.

Conflict is inevitable and unavoidable phenomenon in society. According to J.H. Turner social systems are seen by both Dahrendorf and Marx as in a continual state of conflict. Such conflict is presumed by both authors to be generated by the opposed interest that inevitably inhere in the social structure of society. Opposed interests are viewed by both Marx and Dahrendorf as reflection of differences in the distribution of power among dominant and subjugated groups. For both, conflict is dialectical with resolution of one conflict creating a new set of opposed interests that, under certain conditions, will generate further conflict (Thakur, 2000:31). However, the volume/degree of conflict should be minimized. Conflict is an expressed competition between at least two inter-dependent parties who have perceived or have actual incompatible goals or interests. It can value conflict, data, structural, interest and relationship conflict.

Conflict can arise in the name of utilization, protection, management, conservation, benefit-sharing, decision-making, plan formulation, implementation and resource consumption of forest resources. Conflict can be for and against. Against conflict does not provide in the way of forest management system. Coercion, division, hostility, dissensus, malintegration, differential power, change and contradiction may create conflict. Conflict affects the management of CF process. There are different ways to resolve it by social process but there is an important role of forestry staff to mediate it. Therefore,

knowledge on nature, degrees of levels of conflicts in their effective resolution in different situation is important for successfully proceeding the FM, in the development of Nepal.

The possession of unequal amount of power, property and prestige is related to the possession of unequal resources with which one can secure the good things of life that are commonly desired. Good things of life means good mental and physical health, good education and good job opportunities. Unequal resources also means unequal knowledge unequal information, unequal preparation for competition and consequently unequal standard of life and life style as well as creating the conflict.

According to Marx's economic determinism, the following points should be considered over the conflict.

– While social relationships display systematic features, these relationships are rife/life widespread with conflicting interests.
– This fact reveals that social systems systematically generate conflict.
– Conflict is therefore an inevitable and pervasive spreading through every part of feature of social systems.
– Such conflict tends to be manifested in the opposition of interests.
– Conflict most frequently occurs over the distribution of scarce resources most notable power and material wealth.
– Conflict is the major source of change is social systems (Thakur, 2000:6).

So, in conclusion, conflict refers to the tension, disequilibria, inconsistency, debate, injustice, imbalance, inequality, non-realistic, discrimination and so on. Conflict arises from ignoring traditional systems. Conflicts in the past and present have been based on disputes over the use of resources, i.e., water, forest and land. The absence of a legal framework for coordination and management of trans-boundary resources often leads even to conflict between country to country, community to community, individual to individual. Conflict over NR also result due to international pressure. The nature

of conflict over NR is depend on its volume, types, supply and demand as well as sources.

In conclusion, conflict is a significant argument between two or more parties that deals with matters either tangible or intangible. Examples of a tangible matter are land, water and forests, whereas an intangible matter is abstract, such as power, or loyalty. Similarly, it is an expressed competition between at least two inter-dependent parties who have perceived or have actual, incompatible goals or interests. Conflicts are often viewed negatively particularly in forestry. Conflict can be shown in case of use of forest products, their distribution and management process. This is largely due to poor management of conflicts by the forestry organization.

Conflict has been defined as "situation or state between at least two interdependent parties, which is characterized by perceived differences that the parties evaluated as negative" (Yadav, 1996:33).

Globalization is increasing posing new challenges and creating new conflicts in Nepal (Upreti, 2001:4). For example, the conflict between Article 27.3b of the Trade Related Aspects of Intellectual Property Rights (TRIPs) of the World Trade Organization (WTO) and the convention on Biological Diversity (BD), increasing bio-piracy, uncertainties and threats caused by genetically modified organisms and terminator technology in the agricultural sector are all creating conflict.

2.6   Causes of Conflict

We have already mentioned about the nature and meaning of conflict. The nature of conflict can be constructive and destructive. However, conflict may change something new or more about phenomena. It brings both positive and negative results. Generally, conflict dedicates to the negative version but sometime its base can be positive also. In case of forest management system there are different type of conflict either, internal or external. Behind these conflicts various causes play the vital role to emerge its background. The more deprivations of subordinates are transformed from absolute to relative, the greater

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will be their sense of injustice, and hence, the more likely are they to initiate conflict. Conflict and tensions, and hence, the more groups engage in conflict over realistic issues, the more likely are they seek compromises over the means to realize their interests, and hence, the less violent is the conflict. The more groups engage in conflict over non-realistic issues, the greater is the level of emotional arousal and involvement in the conflict, and hence, the more violent is the conflict. The less functionally interdependent are relations among social units in a system, the less is the availability of institutional means for absorbing violent is the conflict (Thakur, 2000:8). In villages conflicts can occur for many reasons. However, this study will focus on the conflicts related to NRs basically on forest resources.

Conflict has been on a situation or state between at least two interdependent parties which is characterized by, perceived differences that the parties evaluate as negative. Conflicts generally occur either when people have different views or perceptions on an issue. When some one's interest is not considered or fulfilled while making a decision, or when other's interest is encroached upon and so on (Shrestha, 1995:91). Overt and covert issues are also the primary sources of conflicts.

The main conflicts emerge due to need, belief and interest of a person. Conflict can arise in NRM for a variety of reasons. Among them some selected reasons are as follows:

– Disputes may occur between two or more separate local inhabitant/communities each with legitimate interests, over conflicting claims to forest resources.
– Choice about the management of a community held resources may give rise to differentiation among the member of a community.
– Commercial interests to exploit forest resources may differ from those of the local community.
– Decentralization/democratization encourages communities to be more vocal (ICIMOD, 1995:2).

– Lack of participation by stakeholders creates conflicts.

– Lack of information concerning policies, right, changes.

– Change in policies and laws.

– Change in availability and access of resources.

– Change in value and expanded markets.

– Different boundaries through national as well as local level like: establishment of parks, conservation area, hunting area etc.

– Suffering by the basic needs.

– Lack of good opportunities

– Scarcity of resources

– Lack of knowledge practices and attitude.

– Individualism

– Clash of interest

– Power imbalance

– Socio-cultural differences

– Unemployment, underemployment, disguished unemployment and educational unemployment.

– Poverty

– Lack of awareness

– Misuse of fund

– Boundary disputes

– Norms and rules of FUG not being followed.

These are the major causes of conflict, on the one hand, and on the other hand the most importance cause of conflict is the identification of users. When the forestry field staff do not investigate the real users for a particular patch of forest different types of conflict can arise. Similarly, access right to use of forest products, participation, leadership politics, are also core point to arise conflict under forest resources management. Rural people depend on forests for their diverse needs and they have used different forests for different products. For example, they use one forest for fuel wood and another for timber. Also, some forests may provide certain forest products, not all of the forest products needed

by rural people. For example, Schima and Castanopsis forests are not suitable for timber whereas sal forests are very useful for construction timber. In this situation users have to move from one forest to another for different forest products. However, forestry staff generally tends to confine one FUG to one specific patch of forest. In such condition conflicts can emerge when people go to the forests, which are not assigned to them under the new arrangement of CF

Grazing is also another cause of conflict. Similar conflicting situations arise when it comes to the grazing of animals in forests. When competition occurs between two neighbouring FUG for protection and management of the forest resources, the users who have suitable forest for grazing may decide that forest should be controlled. They argue that grazing affects natural regeneration of the forest and increases the possibility of soil erosion. However, the opposition group members claim that it is their traditional right. This kind of conflict emerged all over the country (Yadav, 1996: 42-43).

All those causes of conflict suggest that SFM programme, planning and implementation is not as simple as it sounds. The major competitors of conflict are: intra-community, inter-community, FUG and outsides, and institutions. In forest management system conflicts emerge due to the scarcity of resources and the lack of knowledge, understanding, position and power.

The decline of the forest resources at present has an adverse effect on water resources, productivity of agriculture and livestock. The Master Plan for the Forestry Sector (MPFS, 1989) planned to meet people's basic needs for fuel wood, timber, fodder and other forest products on a sustained basis, and to promote people's participation in forest resources development, management and utilization (HMG/N, 1989). However, the progress in this direction is very disappointing, with the exception of community forestry in the hill region. Nevertheless, recently, conflict is mounting between the government (bureaucrats in the forestry sector) and the Federation of Community Forestry Users Nepal (FECOFUN) to take control of CF. Encroachment of forest and pasture areas by illegal settlers is another severe problem in the forestry sector.

The problems related to indigenous forest protection and use system are mainly concerned with users identification, political and forestry boundary issues, legal recognition, forest utilization, participation in decision making and benefit sharing growing expectations of department of forest support and intervention. Some specific causes of conflict can mention as like:

– There are conflicts between various local groups in terms of their claim over forest boundary particularly of the forest area has been extended over a large area.

– Most of the important decisions are made by the committee members with women and poor people being ignored.

– The villagers do not want to include the users from outside their political boundary like the ward, VDC and district.

– The extraction of timber from the forest is usually charged for. It is often auctioned. These conditions might benefit only rich people.

– The indigenous groups are more into protection than utilization. They want to protect their forest strictly and to use the forest of other areas intensively (Tumbahanphe, 1994:17).

Conflict may be created by coercion, division, hostility, dissensus, malintegration, differential power, change and contradiction. Most of the Nepalese people are illiterate, poor and rural in nature. Specially in hilly area of Nepal, people depend on forest, where they get timber for building construction, fuel wood for cooking food and fodder for livestock.

Nepal is a heterogeneous country, where people of various castes and ethnic groups often speak different languages and have different beliefs and customs. There are inequality and hierarchy in the society due to property, power and prestige. Because of all these differences there may be conflicts within villages and VDC. Sometimes, there may be conflicts of interests between the villagers and outside agencies such as governments department or projects. Change is not random. There is pattern in change. Changes and conflicts are continuous and normal textures of human society. Indigenous and exogenous are the two types of conflict, which can be seen in our society.

2.7 Consequences of Conflicts

Conflict can be productive and destructive. It is also a primary agent for changing the situation and creating a new environment. Conflict can be resolved in a way that helps to achieve the goals in which neither party loses. It creates a new platform for resolving the antagonistic thoughts in congenial as well as holistic way.

2.7.1 Negative Consequences

Poorly managed conflicts can pose serious threats. The consequences of such conflicts are as follows:

2.7.1.1 Mountains Out of Molehills

A minor problem can expand into a major conflict when powerful people impose their will for achieving their interest in the FUG. Sometimes this situation occurs with in intra-FUG, inter- FUG or between FUG and outsiders. As a consequence, these sorts of interferences create serious problems for conflict resolution and the development of the institution and therefore a greater loss to the system as a whole.

2.7.1.2 Helplessness and Separation

Conflict fosters a sense of group separation. It also creates a sense of helplessness for the disadvantaged and poor of the society, when two powerful persons appear with conflicting views for the distribution of forest products and sharing of benefit to the poorer users. One who wants to speak up on behalf of the poor people argues that people should get benefit from the forest on the basis of the number o members of households. Whereas others provide counter arguments by saying distribution should be made on the basis of the number of households rather than number of members within each household. Consequently, some unhappy members which may ultimately lead to the break up of FUG.

2.7.1.3. Decline of Productivity

When boundary conflict emerges between two FUGs, the members of both FUGs may expose their negative feeling to the extent of jeopardizing their previous good relationship. The forest, the source of conflict, can be overused by both FUGs leading consequently to the decline of the forest resource and therefore suffering of the people themselves over consumption lead to lower production of goods and services.

2.7.1.4 Procrastination/Hesitation

When the conflict arises between FUG and Forest Department (FD), all the forestry activities of community forestry slow down. Sometimes it stops all the activities and leads towards jeopardizing the FUG institution. Conflict create dominating situation each and every group as well as every members of that group. As a consequence it has affected the sustainability of the group.

2.7.1.5 Deterioration

If there is a high level of interest and management provided by local stakeholders in forest management group rapid regeneration occurs in some forest areas. However, due to the generation of conflict forests have reverted to open access grazing, leading to the degradation of the resources eventually contributing to the negative impact of the forestry program as a whole.

2.7.1.6 Loss of Bio-diversity

If there is a high degree of conflict there can be seen high encroachment of forest by local people and irregularity in the consumption pattern. Hunting of wild animals, over utilization of floura and fauna. As a consequence, the number of animals has been rapidly declining, reducing the economic growth and development and causing loss of foreign currency earning.

2.7.1.7 Emerging New Conflicts

Conflict creates conflict itself. Tension, inconsistency, red-hand disputes creates new types of conflict, which are never ending.

2.7.2. Positive Consequences

Skillfully managed conflict can provide involved groups with extra confidence. Systematic conflict creates a sound competition, which is the signal of social transformation. Some of the examples of positive consequences of conflict are as follows.

2.7.2.1. Reconciliation of the Interests of the Debating Parties

When two groups are involved for resolving conflicts, the conflicts can end with some satisfaction through working out an integrative agreement of mutual benefits. It never ends on the clear cut win or lose of only one group (Yadav, 1996:49). Both groups involved in this process feel that they have achieved something.

2.7.2.2 Sense of Expansion

When a conflict is brought to the group, the group members discuss it and provide their arguments in favour and against. By doing this, the group members get to know each other and build up a rapport which is very useful and essential to resolving conflicts. Thus, they give their judgment and bring a solution with mutual understanding and consensus.

2.7.2.3 Interaction

Conflict provides an opportunity to promote interaction at both the inter-personal and group level which then creates a new situation to address their own views (Yadav, 1996:50). Because every person has some experience and perception to look at the situation though their non eyes brings unique contribution and increases the interaction and collaboration to solve the problems.

2.7.2.4 Internal Change

When conflicting parties involve is dialogue with others for different needs and from different beliefs, they are forced to make adjustments and avoid making just superficial and stereotype answers. In addition, they verify their own needs with respect to others. The powers to make adjustment causes a person to

explore new ideas and feeling that can challenge an individual to move from rigidity to flexibility.

2.7.2.5 Clarifying the Real Problems

When the disputing parties are involved in discussion, the real causes of the conflict emerge which is often concerned with certain perceptions and feelings. However, this helps the parties to develop an understanding of each other and to solve the problem.

2.7.2.6 Team Work

Conflict tends to promote an establishment of team work at all levels and creates a new system while managing conflict in implementation stage. It secures judicious egalitarian decision, taking of responsibilities, sharing of benefit and finding out a general consensus with commitment and confidence. It also provides an opportunity of building up a rapport with all the shareholders involved in the conflict, resolution with mutual trust, independence, awareness and self-reliance. Hence, it includes team work to building up a team in management of forestry by the user groups.

2.7.2.7 Increased efficiency

Conflicts provide the parties involved with opportunities to express their thoughts in logical order rather than expressing the ideas in a haphazard way. It also creates a situation of competition between the parties as well as individuals to launch the forest management activities and the tools that can be used to dissolve related problems, conflicts, disputes and difficulties more effectively. Therefore, they increase their efficiency for resolving the conflicts with new thoughts and ideas that come from their discussions and brainstorming.

2.7.2.8 Feeling of Power

When two parties express their conflicting views they feel that they are contributing something to the solving of the conflicts that gives them a feeling of power when the conflict is solved. Furthermore, they gain full working experience of discussing, difficult problems and questions with the group and

other stakeholders. Once the conflict is resolved, each involved member feels a happy and powerful member of the group.

2.7.2.9 Group Unity

To perform some activities effectively, collective actions rather than individual actions are demanded. Protection, management and reforestation require group actions. Moreover, the group enhances individual productivity and constraints can be solved in a group. It fosters a sense of group unity because differences and diversity unite together for achieving the common goals. It creates a platform to express their views on the basis of equality that gives them unity and a sense of power. In addition, conflict also cultivates a sense of identity as disputing groups reconcile individual differences.

2.8   Method of Conflict Resolution/Management

There is a familiar statement, where there is will, there is way. Similarly, where there is conflict, there is also resolution/Management. In case of forest resources user groups are the main actor to arising conflict themselves and also are candidate for solving that problems. Conflict, of various sorts, affects all FUGs to some extent during their development. The key to FUGs maintaining the momentum of their development is the successful management and resolution of these conflicts. FUGs have been very effective in resolving conflicts and have grown stronger and more cohesive through the experience many more are beset by conflicts, which they lack the capacity to resolve (NUKCFP, 2001:127).

Boundary disputes, misuse of fund, and Norm and rules of FUGs not being followed are the major issues of conflict over forest resources. The word 'conflict' carries negative connotation. In many settings it could be seen as a potential force for positive social changes its presence a visible demonstration of society adopting to a new political, economic or physical environment (NUKCFP, 2001:129).

Generally, conflict occurs when people have differing views or perceptions about issues or in a situation when someone's interest is not

considered or fulfilled and individual interests are encroached. The type and level of conflict vary according to situation and issue related with the value or resources. Presently, conflict in forest using pattern is mainly related with ownership and power over resource use. Virtually, all the forest boundary conflicts have dragged on without resolution from the time of FUG formation. FM systems should be characterized by having clear objectives. A further very important aspect of management is the strategy employed to assure the sustainable availability of the desired product in a given time frame. Various control mechanisms were observed which had been developed to regulate the institution and NR (Tamrakar, 1996:7). Knowledge about management of institutions and forests are the main elements of indigenous FM system as well as method of resolving conflict.

Some special methods of conflict resolution are as follows.

2.8.1 Demarcation of Boundary

The principal method of resolving boundary conflicts is to invite the district survey or to came and specify on the ground where the legal boundary lies. Often the true boundary is well know to every one.

FUG support needs for boundary dispute resolution.

– Support in the form of training could be given to the FUGs members so that they can measure land and resolve conflict in the villages.

– When FUGs have come to DFO to request help with conflict resolution the DFOs often say it is FUGs forest to deal with but it is stated clearly in OP and C land ownership lies with HMG/N. Legal forest land belongs to DFO so DFO may play and official role to resolve land conflicts together with FUGs.

Conflict is a social as well as technical issue. DFO staff need social skills so that they can facilitate boundary dispute in the village while using technical knowledge of land measurement (NUKCFP, 2001:131).

2.8.2 Reasonable Use of Fund

NR-based economic growth is called development, whereas reasonable use of NR in order to minimize of conflict between two FUGs are known as resolution. With the maximum participation of women, *Dalit* and poor people in the utilization of fund, there can be no conflict. Fund should be mobilized with highly accountability. Available fund should be distributed among the various caste ethnic group including women and pro-poor people. Optimum allocation of available fund with the people's participation. As a consequence there may create sound environment among the FUGs.

2.8.3 General Policy Implications

This is an important method for conflict resolution. Improved and inclusive FUG bottom-up planning to include all users would address causes of many of the minor conflicts by ensuring decisions reflected the wishes of users more fully.

2.8.4 Negotiation

Where the parties meet face-to-face to reach a solution, which is mutually acceptable. Question and answer method should be appropriate for negotiation.

2.8.5 Mediation

The process of mediation is the effective way to solve conflicts.

2.8.6 Conciliation

Where a neutral party communicates separately with disputing pasties to try to reduce tension and agree on a process for resolving the dispute.

2.8.7 Facilitation

It involves the help of an inertial person in designing and conducting a meeting.

2.8.8 Arbitration

It involves voluntary submission of cases by the parties to a natural party for decision making, often negotiating a tailored set of rules of procedure, which they agree to follow.

Stoner and freeman (1989) describe three major conflict resolution scenarios:

- Dominance and suppression: this can occur in four ways.

    - forcing
    - smoothing
    - avoidance
    - majority rule

- Compromise

This is a method of conflict resolution where people try to resolve conflict by convincing each party in the dispute to sacrifice some objectives in to gain others.

- The integrative problem-solving method

In this method, inter-group conflict is converted into a joint problem solving situation that can be dealt with through problem solving techniques. Together parties in the conflict situation try to solve the problem that has arise between them. Instead of suppressing conflict or trying to find a compromise, the parties openly try to find a solution they all can accept, by means of consensus and confrontation (Shrestha, 2000:23).

There are other means to diffuse conflicts. Public participation has been suggested as to over come to it. However, as Bachelard (1979, 1980) and Florence (1979) have noted public participation is a complex and often ill defined process, with many unresolved issues as to how the public interest can be distilled from the multiplicity of diverse public interest groups that complete for power and influence. But good management planning provides and appropriate tool for addressing these problems and conflict resolution, because it provides an opportunity to both clarify and review resource use priorities.

Burton (1974) has identified three phases that provide a useful starting point for considering the resolution over the conflict dilemma. These three phases are "planning of people", "planning for people" and "Planning with people" and

its logical extension "planning by people" (Shrestha, 2000: 24). It means that primary task of planner is being seen as helping communities to help themselves.

Participatory tools have been useful for learning more abut the dynamics, causes and consequences of resources conflicts carefully designed PRA process can break many taboos regarding open discussion of resources conflicts. Participatory tools reveal the various distinctive mechanisms to resolve community conflicts.

Potentials for conflict management (CM) and resolution are summaries like changes in FUGs formation procedure, survey and clear map at hadnover, photo maps use, legal advice from district government layer, role of DFO, role of networking, splitting of FUGs, awarness raising or land ownership rights to FUGs.

For the effective management of conflict, some sort of methods are applicable which are as follows:

– Fulfillment of basic needs
– Provide any kind of opportunities
– Compromise, consensus, integration and sacrifice.
– People's participation, meditation and intervention.
– Learning by doing.
– Increase in education, awarness, communication and empowerment.
– Adopt new social movement
– Build confidence and capacity.
– Proper utilization of rules and regulation.
– Optimum allocation of fund.
– Fixed demarcation of boundary
– Negotiation and collaboration

2.9   Process of Effective Forest Management System

The main thrust of the forest sector is to support national objective of poverty alleviation by ensuring people's participation needed for sustainable

development of forest sector in the management of forest, plant resources herbs, watershed management and bio-diversity conservation along with increasing employment opportunities through the development of the forest based industries (NPC, 2002-2007:182).

Active participation of the poor, women and backward sectional population will be sought in the plan formulation process, decision making process, implementation of program and monitoring of the forest sector for conservation, management and proper use. Along with this, the public sector experts can also be used and arrangement will be made to implement these types of scheme with the consent of the related bodies. To achieve direct contribution of the forest sector by means of livelihood opportunities to alleviate poverty, the policies and programs of the forest sector will be effectively implemented and to provide pragmatic form to the broad perspective of autonomous management, the program will be implemented through the local level group by helping them develop their competency. By giving priorities to the program which help develop the capacity of the user's groups managing the forest resources, continuity shall be accorded to hand over the community forest based on capacity necessity and wishes of the local people (NPC, 2002-2007: 189).

Integrated forest management system will be carried out in partnership with the local communities in government managed forest. Conservation of biodiversity and the sustainable use will be given emphasis on the basis of people's participation and landscape as well as the time of the program of conservation, promotion, management and utilization of forest are formulated. Indigenous knowledge must use in case of forest management system. Soil and watershed conservation program could be launch. Action oriented forest research should be adopted. Effective participation of women, *Dalit*, poor people, marginal people and especially in rural poor in the management of forest and use of forest resources should be increased.

Human resources development policy and information and communicate policies should be formulated and implemented. Such type of policy must be

launched whereby various governmental and non-governmental agencies like - I/NGOs and private sector to ensure supply of manpower for the sustainable forest management. The aspect of gender equality will be taken into consideration in the training on human resources development in forestry sector and policy will be followed to increase the number and quality of such training.

Various programs like community forest, leasehold forest, formation of user's group and mobilization, management of government managed forest, human resources development, training and dissemination and information, management of national parks and wildlife reserve and bio-diversity conservation and promotion programs should be implemented on feasibility basis with active participation of private sector, CBOs and NGOs. In case of forest management system, there should be positive role of government. Co-operation among various FUGs. Coordination between different department. Raising public awareness enhances the capacity of local user groups and in income-generating activities and programs and activities like training, seminar and research would be conducted by the CBOs, NGOs as well as civil societies.

A conflict can arise between two or more households or communities are sometimes resolved upon the involvement of village elders, the village headman and/or other person. This may lead to negotiated agreement indicating mutual argument. To effectively resolve conflicts to advance the outcomes from NRM, a deeper understanding and appreciation of local dynamics and power relationship that characteristic community-based NRM activities are needed. Such activities may lead to sustainable forest management process also. For the effective manage the forest resources, there needs to be appreciation of economic and social status, local knowledge systems, values and understandings and objectives of the users (Upreti 2001: 46). A successful NRM is the one that promotes equity, increases the standard of living users, provides ecological services and uses conflicts as a source of learning.

Several researchers have shown that rural communities in Nepal are far more capable than governmental organization in sustainable managing their NR.

So, the fact is that local people's knowledge must applied with very effectively into the forest resource management. The effective management of NR is mainly determined by needs and interests, coping strategies adopted procedures and the initiatives of resources users. The local governments (VDC, DDC and Municipality) should allocate their massive part of annual budget for the effective management of forest resources.

FM can be defined as "deciding what one wishes to do with a forest, taking into account what one can do with it and deducing what one should do with it (FAO, 1993:59). Forest can be managed in many ways and for many purposes. FM is not carried out in a vacuum. The method adopted must be appropriate to the physical conditions as well as to the socio-economic and institutional context in which it will be implemented.

The United Nations Conference on Environment and Development (UNCED) 1992 comprehensively described SFM as a key point like policies method, and mechanisms adopted to support and develop the multiple ecological, economic, social and cultural roles of trees, forests and forest lands … (FAO, 1993:60). It is important to be clear about exactly what the forest management is expected to achieve. In case of SFM system, there should be fixed objectives. According to objectives, the programs should be launched. Management objectives will vary substantially according to whether the forest is publicly, privately or communally owned.

Once the management objectives have been clarified, the task is to decide on the management and silvicultural techniques to be used. The application of forest management in this wider sense would, today, represent enormous progress in most of the forest areas of the world. SFM therefore involves planning the production of wood for commercial purposes as well as meeting local needs for fuel wood, poles, food, fodder and other purposes.

CHAPTER THREE
RESEARCH METHODOLOGY

A research undertaking must be equipped with research methodology. Research methodology is a format of methods that has to be followed as guiding principle in a scientific study. It is a science of methods/rules and it deals every step of method. Different method can be applied in some research. In order to achieve the objectives of the research, methodology is necessary. This research also adopted some specific methods. In this chapter, the research method used to conduct the present study by collecting required information needed for the study is discussed. It deals with rationale of site selection for the study, the research design, nature of data, sampling procedure, technique of data collection and the analysis of the data.

3.1   Rationale of Site Selection

Panchakhal VDC of Kavre district was selected for the study because this area has low level of agriculture production but is rich in forest resources. The area is very rich in non-timber forest products (NTFP) also. However, such valuable resources have been largely ignored. In the study area, there are various governmental and non-governmental agencies launching different programmes for the sustainable forest resource management but very few positive result of sustainable forest management were to be observed. Forest resources are the major sources of livelihood for local people. So, it is necessary to identify and manage such NR by providing awareness and information to the local people. The area is chosen for the study also due to its better accessibility to collect primary and secondary data through different, techniques, tools and documents. Another reason behind selecting this VDC was that it is virgin area in terms of forestry research.

3.2   Research Design

The research design for the study comprised both exploratory and descriptive research. These designs were needed since there was no prior studied

on conflicts on FUGs in this area and were also needed to describe the process of conflict, its historical background and present strategies to exchange with. So to find out the present and past causes of conflicts in forest resource management (FRM), the study had been concerned descriptive and exploratory research design.

3.3   Sampling Method

Different sampling methods can be applied in a research. In this study, all the users were the universe and households were taken as the unit of survey. The research area and FUGs were selected purposively. The study area is heterogeneous in terms of caste, ethnic group and geographical setting. Therefore, proportional stratified sampling procedure was followed. Out of 2364 HHs, 387 HHs (16.4%) were selected on the basis of stratified sampling procedure. Sampled households were selected randomly.

3.4   Respondents

Information are the main pivot of research. Without actual data research can not be fruitful. Thus, source of information should be accurate and appropriate. Respondents are extremely important sources. Therefore, in this research the head of the households were taken as the respondents. Apart from them, key informants, executive members of the CF, teachers and local political leaders were also the sources of the information collected.

3.5   Nature and Sources of Data

The nature of data in this study is both primary and secondary. Besides it, data are also qualitative and quantitative nature. Primary data were collected through fieldwork using observation, questionnaire interviews, focus group discussions, key informants survey and others. And the secondary data were collected from various sources such as: various journals, articles, papers, reports, books, records, Act and Regulation related to conflicts on NRM. Secondary data have been used to extend and elaborated to strengthen the context provided by the primary data.

3.6 Technique of Data Collection

We know that the reliability and validity result of any research depends on its techniques used for data collection. Hence, for every study, the data collection techniques are most important to obtain reliable information. This study had also used different techniques such as questionnaire, interview, observation, and key informant interviews.

3.6.1 Questionnaire

Questionnaire is list of questions asked to respondents to obtain actual facts. In this study, many questions were used to get actual information about the conflict, causes of conflict, resolution method and others. Mainly, structured and unstructured questionnaires were used for the collection of data for selected HHs. Checklist were developed to conduct the interviews with the respective respondents.

3.6.1.1 Structured Questionnaire

Only one set of structured questionnaire was used per household. These questionnaires contained both close and open ended questions. Household survey was conducted to gather more information with the help of structural questionnaire. Questionnaire consisted of questions as past activities on forest, issues of conflict, nature of conflict, method of conflict management, contribution of forest resources to the local people and effect of conflict.

3.6.1.2 Unstructured Questionnaire

During the period of research unstructured questions were prepared to get the information on socio-economic variables. A total of 387 sampled households were interviewed using this questionnaire to collect socio-economic condition of the sampled households. Basically, key informant were asked several cross-questions to get reliable data. These types of questionnaire were very helpful to obtain required facts.

3.6.2 Observation

Observation is the basic anthropological tool for the collection of qualitative data in the fieldwork. Participant and non-participant observation were the main source for obtaining primary data. Both observation were used in this study. Observation was conducted to find out the relationship between the FUGs members in different resource management, utilization, decision-making, participation in forestry activities and benefit sharing of the forest products considering the equity aspect. In reality observation intensively helps to obtain primary data connecting with forest resource mobilizing using local people's disputes as well participation methods.

3.6.3 Key Informants

Key informants are important sources of anthropological data. With the help of some social workers of FUGs, political leaders, teachers, poorer household, aged person and female heads were purposively selected as key informants. So it was ensured that they to be included in the sample. Some of the past and present executive members, user groups, concerned ranger, VDC chairman and ward chairman were the valuable sources of information. They were interviewed so as to know about the past and present disputes in the process of formation and function of FUGs and their perception for the encountered conflicts. So, key informants helped to find out fact in the research and the help to find out detail information about the study area.

3.6.4 Focus Group Discussion

Focus group discussion was very compatible during the field survey and success to achieve reliable information. In course of time, a list of household was prepared for the focus group discussion. Five focus group discussions were carried out. Among them one was lower caste, next was female group and other two were according to caste/ethnic composition such as Danuwar and Brahmin, and last one was a teachers' group. Focus group discussions were found to very successful to get the holistic views on conflicts and its management practice.

3.6.5 Interview

Interviews were conducted to get information about the conflict, its causes, consequences, resolution method as well as participation on SFM system for the local people of study area.

3.7 Data Analysis and Interpretation

Information does not speak by itself. The information collected in the field, which should be analyzed and interpreted in order to make the research meaningful. Analysis is the careful study of available facts so that one can understand and draw conclusions from them on the basis of established principle and sound logic. For the purpose of this study, the different data obtained by using various sources which are scanned and tabulated under different headings. Data gathered from primary and secondary sources and they analyzed according to their nature. Qualitative data has been descriptively analyzed whereas quantitative data has been analyzed and interpreted on the basis of statistical tools like percentages, frequencies and different charts.

3.8 Limitation of the Study

Forest resources are found scattered all over the country. It is naturally very difficult to study all these resources. This study has been limited with the Panchakhal VDC of Kavre district, just as each study have its own limitation. Due to the various constraints, it has not been a comprehensive study and it focused to analyze the certain aspects of NRM, especially forest resource management at Panchakhal. There might be various other unknown variables affecting conflicts in the SFM system. This study has been concentrated on a single VDC and therefore, the general conclusions derived from this study may not represent conclusive implications for all forest areas in Nepal.

CHAPTER FOUR
SETTING OF THE STUDY AREA

4.1   Physical Setting of Panchkhal VDC

Kavrepalanchok district covers 87 VDCs and 3 Municipalities lies in the Bagmati zone having 85°49' east longitude and 27°20' to 27°85' north latitude is in 31 km towards east from Kathmandu. The elevation of land is 350m (Dolalghat) to 3018m (Bethanchok Narayan Danda) from the mean see level.

The main trade road to Tibet, Araniko highway passes through this district. The historical cities in this district were Banepa, Dhulikhel, Panauti and Khopasi. The main occupations of people of the district were agriculture and animal husbandry where as the city people had their owned trade business.

In Kavre district there are many basins like Panchkhal, Sunkhosi, Indrawati, Dapcha, Khopasi, Panauti and Bhakunde Besi. These basins are the granaries of the district.

There are variation on annual precipitation in this district. For example below 1300mm in Sunkosi, 1300-2000 mm in Roshi area and more than 2000mm in Bagmati watershed area (Metereological record, 1971-1984). Panchkhal VDC, the study area, is located to the middle part of northern side, is one of the 87 VDC of Kavre district.

There are different opinions in the forming of this VDC. Prsence of five different settlements of the people and five flat lands in this VDC is the main cause of naming 'Panchkhal' itself.

It has now developing in its infrastructure such as irrigation, health, education, electricity, communication and agriculture as well as market access. Since, the VDC is near to the city a lot of INGOs were working here. The program implemented by those INGOs along with government has played a significant role to change the life standard, attitude and behaviour of Danuwar in this VDC.

4.2   Location and Climate

Panchkhal VDC is situated at 85°38' east longitude to 27°741' north latitude towards north east of Kathmandu in the distance of 40km. Araniko highway, the trade road to Tibet in the boarder of neighbouring country China has passes through this VDC, touches the all nine wards and covers about 13km of the distance within this VC. The elevation of this VDC is 937m to 1219m from the mean sea level having annual precipitation more than 1200mm.

The structure of land pattern in this VDC is not uniform that is higher in northwest part and lower in southest part. The average maximum and minimum temperature of Panchkhal VDC is 30° and 16°c. Because of the hot climate and the malaria epidemics, there were only the Danuwars living in the Besi from their generations. But right after the eradication of malaria in the 1960 other non-Danuwar began to migrate in this place. Now the place has become a home of many ethnic groups such as Magar, Tamang, Newar, Brahmin and Chhetri.

Panchkhal VDC is surrounded by many other VDCs and municipality. They were Hokse and Devbhumi Baluwa VDCs in east, Dhulikhel municipality and Kavre VDC in west, Anaikot, Jyamdi and Jaishithok VDCs in the north and Patlekhet and Fulbari VDCs in south. The natural boarder of Panchkhal VDC is rivers and the hills.

The Danuwar people of the study area also live in dune region on the bank of Bagmati River. Nowadays, Danuwar people are found all over the country because of their migration and travelling from one place to another in course of searching for jobs.

4.3   Population Distribution of Panchkhal VDC

Different kinds of caste/ ethnic people are distributed in Panchkhal VDC. The total household is 2364 and the total population of Panchkhal VDC is 11872, where, 5753 male and 6119 female. The population distribution is within nine wards. Among nine wards, no. of household and population in ward no. six is large and ward no. three is small. In totality, the no. of female is more than male, which is shown by the following table:

Table No. 4.1

Population Distribution of Panchkhal VDC

Ward No.	Household	Male	Female	Total
l.	195	495	484	979
2.	141	348	362	710
3.	129	340	351	691
4.	235	545	591	1136
5.	223	529	533	1062
6.	606	1458	1540	2998
7.	274	608	707	1315
8.	244	646	703	1349
9.	213	784	848	1632
Total	2364	5753	6119	11,872

Source: CBS 2002

4.4 Social Profile

The total population of Kavre district is 3,85,672 whereas male is 1889747 and female is 196725. There are 70,503 households.

This district is inhabited by various ethnic groups such as Bahmins, Chhetri, Newar, Tamang, Gurung, Rai, Limbu, Thakali, Magar, Bhujel, Gharti, Danuwar, Jirel, Majhi, Craine, Sunuwar, Chepang, Kumal, Bote, Lepcha, Route, Raji, Dhami, Kami, Sarki, Badi, Sherpa, Bhote, Pahari, Hayu etc.(DDC profile, 1994) (Zoowa, 2002; Pp: 34)

The total population of panchkhal VDC is 11,872 in which males and female composites were 5,753 and 6,119. There are 2,364 households.

Total Danuwar people in Nepal are 31,849 (6.14%) whereas male and female is 15,745 and16104. And total Danuwar people are 4,118 in Kavre district and 1,347 in Panchkhal VDC.

4.4.1 Caste/Ethnic Composition : of Pachkhal VDC

Table 4.2 : Caste/Ethnic Composition : of Pachkhal VDC

Caste/Ethnic	No. of Person
Brahmin hill	3518
Newar	1958
Chhetri	1382
Danuwar	1347
Tamang	1058
Sarki	606
Sanyasi	588
Kami	573
Damai	293
Gharti/Bhujel	155
Bhote	91
Magar	80
Gurung	29
Thakali	27
Rai	18
Unidentified Castes	18
Churaute	16
Kurmi	12
Kalwar	12
Teli	11
Sunuwar	10

Nuniva	10
Tharu	9
Thami	7
Unidenfied Dalit	7
Koiri	5
Kumhar	5
Others	27
Male - 5753, Female - 6119 and Total - 11872	

4.4.2 Religion of Panchkhal VDC

Table 4.3 : Religion of Panchkhal VDC

Religion	No of Person
Hindu	10625
Bauddha	1106
Christian	124
Islam	16
Kirat	0
Jain	0
Sikha	0
Bahai	0
Not stated	1
Total	11872

Source: CBS, 2002

4.5   Natural Resources

4.5.1   Flora and Fauna

Forest is the main natural of Panchakhal VDC. There are two types of forest, government forest and community forest. The forests have cover about 36.52% area of the VDC, in which 17.90% area covered by governmental and left 18.62% area is covered by community forest. The government forest has occupied 387.09 hectare of land having the major forest were Panchakhal, Lamidanda and Thumka forest. Those governmental forests were not well managed and supervised with relative to the community forest. The name of the community forest are Thuli community forest, Dhaireni community forest, Kajiko community forest, Kolako Dando community forest, Ratmate community forest. These forests have covered 372.16 hector land of Panchkhal VDC.

Climate contrasts are reflected in natural vegetation. Sal (Shorea robusta), Bakaino, Chilaune (Schiima Walichii), Banyan tree, Bo tree, Harro, Panauri, Sallo, Champ, Koiralo, Eucalyptus, Sisso. Badahar, Sugandhakokila, Camphor, Simal, Sirnatara etc are the main flora found in these forest. Some of the species such as Camphor, Yellowsandalwood, Eucalyptus, Silky oak tree, Sisoo (Dalbergia sisoo), Sugandakokila, Badahar, Ultra sambaed tree were introduced in this VDC by some I/NGOs.

Besides this, various fruit plant are found in this VDC. Since the soil condition of this VDCC is mostly laterite and dry, the fruits plant like Guava, orange, lemon, sweet orange, pears, mango, Jackfruit, banana, papaya etc are found both in forest and public land.

Tiger, leopard, rabbit, jackal, forest cat etc are the main fauna found in this VDC whereas some of the reptiles such as snake, lizard, squirrel etc are also found. Some of the birds like, crow, parrot, dove, eagle etc are easily found in this VDC.

4.5.2   Water Resources

Though the study area has been facing the problem of scare water resources, Jhikhu Khola, Danfe Khola and Chakhola are the main permanent source of water. Jhikhu Khola flows through middle of VDC, Danfe Khola flows through eastern boarder and Chakhola flows through northern boarder of the VDC. Those Kholas are not sufficient for irrigation of whole land of the VDC.

People have built a Rayale irrigation canal about 10 km length in 200. The canal has its initial point in the river of another VDC, by which people can now able to using their agricultural land in dry season. This helped the farmers to cultivate their land during the year. There has been not found any study on the access of ground water.

For drinking water, people use to collect water from natural water sources (kunwa) found throughout the VDC along with the drinking water taps which were jointly made by District irrigation office and drinking water authority. Some of the drinking water taps in this VDC were made by Nepal Red Cross Society with providing pure drinking water to keep people healthy. They have formed a user's group in every reservoir who has to pay a certain amount of money in other to use the drinking water.

4.5.3 Mineral Resources

Nepal has contained many more minerals in its core. Because of the lack of knowledge and wealth, these were besides the study and excavation. The minerals such as iron, copper, mica, gold, lead, zinc, lime stone, mineral oil and gas, coal, nickel, sulfur, graphite etc are available mineral resources of Nepal.

Among them some of the minerals have been extracted here i.e. crude coal, lime stone, laterite soil, sand and bolder. The crude coal is generally used for heating/ firing purpose in brick and tile furnace as well as some other industry, limestone and laterite soil is used for making of cement and sand boulders were used for constructing purpose.

In Panchakhal, even now not any mine and mineral deposit have been studied nor extracted. There is a possibility of finding of stone, limestone, laetrile soil, copper and gold. In Lichhavi period, the place Tamaghat is known as "Tamrakutsala" which means copper ancient name of Jhiku khola is "Sunka" and " Sunmati" and ancient name of Danfe khola is "Kanka" indicates that there may be possibility of finding of gold and silver respectively.

From the past, people use laterite soil in their household and sand stone were use for construction purpose is in practice. The laterite soil also consume in large scale by the cement factory extracting from this VDC is well known.

4.5.4 Agricultural Land

The land of panchakhal VDC can be divided into three categories khet land which have well irrigation facility and cultivated during the year, Bari or pakho which have not irrigation facility and have to depend on mansoon for cultivation having only once cultivation during the year. The land near the bank of river is known as khet whereas the having a sloppy step hill and somewhere- flat dry land is known as bari or pakho.

The VDC has contains a suitable land for agricultural purpose is 1,287.30 hectare which is 56.81 of total land. In this agricultural land, 24.51% is irrigated and lift 32.30° is not irrigated. The left land of VDC is covered by forest and grazing land having 810.40 hectare and 29.80 hectare respectively. Deforestation has been a matter of major ecological concern in recent years. Increasing need for agricultural land to feed a growing population and livestock which the land resource system cannot sustain excessive grazing, the annually increasing need for domestic fuel, and wanton felling trees for short-term gains have all contributed to a rapid rate of destoration. Ninety- eight percent of rural and 83% of urban energy consumption is derived from fuel wood.

The major food crop cultivated is paddy, maize, wheat, buckwheat, millet etc and the cash crops which are the main income generating from agriculture are potato, tomato and vegetable farming. They use more chemical fertilizer, insecticide and pesticide in their field which causes the finding of various unknown disease among them. Therefore, some of the farmers who were serious on their valuable life have now initiating their farming system in organic way.

4.6 Occupation

The subsistence of the people of Panchakhal VDC is based on agriculture. The major food crops grown in the area are paddy, maize, millet and wheat, in which paddy occupies the dominant position. Tomato, potato and green vegetables are the cash crop grown in this VDC. Beside that, the people have occupied business, factory, service, daily labor and various other works as secondary occupation. The people having agriculture as major occupation have labor, service, business, factory etc as major occupation have agriculture as secondary occupation or vice versa. The people of this

VDC have not enough food for the year. There are very least people having food for the year. The VDC have some skilled persons like :

1. Overseer/Engineer
2. Health assistant
3. Carpenter/Mason
4. Dhami/Jhakri
5. Driver
6. Teacher
7. Veterinarian
8. Diary master
9. J.T.A.
10. Blaksmith

4.7 Educational Status

Literacy status of indigenous people aged 6 years and above and educational attainment by ethnicity, 2001.

Table No. 4.4

Educational Attainment by Ethnicity (6 years)

Ethnicity/Caste	Literate (%)	S.L.C. and equivalent		C.L. and equivalent		Graduate and above	
		No.	%	No.	%	No.	%
Majhi, Danuwar, Thami, Lepcha	37.38	1873	0.20	886	0.17	163	0.05

Source: CBS 2002a

Above table shows that, four ethnic groups Majhi, Danuwar, Thami, Lepcha has literacy rate 37.38 percent. Out of total percent of their literacy rate, S.L.C. and equivalent is 0.20 percent, C.L. and equivalent is 0.17 percent and graduate and above is 0.05 percent.

Table No. 4.5

Educational Status of Kavrepalanchok District, 2004

Educational Status	Rank	Data Value
Primary school net enrollment ratio (%)	2	97.4
Ratio of girls to boys in primary education (%)	5	100.9
Student teacher ratio in secondary education (%)	30	24.4
Literacy rate of population 15-24 years (%)	19	81.3
Ratio of literate female to literate male 15-24 years (%)	26	82.9

Source: CBS 2004

Above table shows that, Kavrepalanchok District is 2nd position in Primary school net enrollment ratio (%), 30th position in Student teacher ratio in secondary education (%).

Table No. 4.6

Population Composition

	1981 Census	1991 Census	2001 Census	2005 Projection
Total Population	307150.00	324329.00	385672.00	413061.00
Male	156218.00	159784.00	188947.00	202365.00
Female	150932.00	164545.00	196725.00	210696.00
Sex Ratio	104.00	87.00	96.00	96.00
Total Household	49545.00	56630.00	70509.00	75516.00
Average Household Size	6.20	5.70	5.47	5.86
Literacy rate (%)	24.30	38.50	63.75	63.75
Population Density Per sq. km.	220.00	232.30	276.00	296.00

Source: CBS 2004

Above table shows that, total population, population density per Sq. Km, no of household and literacy rate (%) from the year 1981 to 2001 is in ascending order. But average household size is in descending order.

Table No. 4.7

Education Status of Kavre District

Type of School	No. of School		No. of Students		No. of Teachers			Ratios				A.cl. size
	Total	Private	Total	Girls	Total	Train	Female	Std/ Sch	tch/ Sch	Std/ Tch	NER %	
Pre-Primary	130	76	6871	3304	421	-	144	52.85	3.24	16.32	16.70	17.62
Primary	591	77	83748	41874	2445	249	599	141.71	4.14	34.25	97.40	28.34
Lower-Secondary	181	35	21281	9587	465	143	49	117.57	2.57	45.77	47.10	39.19
Secondary	93	21	9383	4001	385	188	35	100.89	4.14	24.37	29.00	50.45
Total	595	209	121283	58766	3716	580	827	204.18	6.26	32.64	69.00	15.71

Source: CBS 2001/02

Above table shows that, the total no. of primary school in Kavre district is more than secondary school. In total no of schools, government schools are more than private schools. Girl students are less than boys in all type of schools. The no of female teacher is high in primary level.

CHAPTER-FIVE

ANALYSIS AND INTERPRETATION OF DATA

This chapter discusses the major findings of the study. It describes various types of conflict that were found among the sampled households during the study period. Besides it, this chapter described the people's participation in forest management system, contribution of forest to the local people, the ways for effective forest management and so on.

5.1   Social Profile of the Study Area

5.1.1   Population Composition of Sampled Household

It is found that Panchakhal VDC is heterogeneous in terms of caste/ethnic composition. The people having different castes and ethnic groups are living in different localities with different professions and activities. The social structure of the village is highly ethnic oriented. There were so many castes such as Danuwar, Brahmin, Kamis, Sarkis, Damai, Newar, Sanysi and others. They have their own particular culture, customs, rituals and life style. The 101 households have been taken out of the total of 619 for studying various parameters.

Danuwar and Brahmin are the major caste/ethnic groups in the study area. The highest percentage of households belongs to Danuwar, 62.37 and the second highest percent of households belongs to Brahmin, 24.75. Therefore, the participation of Danuwar takes important role in the FM. The figure below also represents the composition of the study area.

5.1.2   Age and Sex Structure

Age and sex structure is an important aspect of human population. The population plays on important role in the social structure of the society. Age and sex, composition, birth rate, death rate and density, are the major tendencies of demography. Sex refers to the male and female. The development of any community depends on its active and healthy population. The following table shows the as and sex structure of the respondents.

Table 5.1: Age and Sex Structure of the Respondents

Age group (Years)	Male		Female		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Below 14	62	29.39	71	31.28	133	30.37
15 to 60	103	48.81	107	47.13	210	47.94
60 above	46	21.80	49	21.58	95	21.68
Total	211	100.00	227	100.00	438	100.00

Source: Field Survey, 2009.

The above table shows that economically active population constitute 47.94 per cent and the dependent population include 0-14 years are (30.37%) and above 60 years (21.68%), which is a positive sign of the study area. The sex ratio denotes that the number of male population (211) is not equal to the number of female population (227). The above table shows, male are relatively more than female among the economically active population. Nearly 49 per cent of the males are economically active, whereas 47.13 per cent of the females are active. It is found that the per cent of below 14 years male is 29.39 per cent whereas the female is 31.28 per cent. Similarly, above 60 years male percentage is 21.80 and the female percentage is 21.58. The number of female population is little bit higher than that of male.

5.1.3   Educational Attainment

Education is source of knowledge of ocean. It make us qualified as well as polite. Education creates opportunities. In the study area, because of the access to schools and other educational programs there is good condition for high literacy rate. Educational status is measured for the four groups. The following table shows the educational status of respondents in the study area.

Table 5.2: Educational Attainment of the Respondents

Level	Female		Male		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Illiterate	23	10.90	34	14.97	57	13.01
Literate	59	27.97	66	29.07	128	28.53
School completed	94	44.55	81	35.69	175	39.95
Higher education	35	16.58	46	20.26	81	18.49
Total	211	100.00	227	100.00	438	100.00

Source: Field Survey, 2009.

According to the above table, among the sampled 101 households, 13.01 per cent were illiterate, 28.53 per cent literate, 39.95 per cent received complete school level and only 18.49 per cent had received higher education. It is found in the study area that female literacy rate is 89.1 per cent, i.e. 188 female out of 101 sampled households. The remaining 23 females or 10.90 per cent were illiterate. Male literacy rate is 85.02 or 193 male were literate and 14.97 per cent were illiterate in the study area. The overall literacy rate was 86.99 per cent in the study area, which is higher than the national literacy rate where national literacy rate is 53.7 per cent (CBS, 2003). The high literacy rate of people seems positive attitudes towards forest protection and management.

5.1.4 Live Stock Size

Livestock is the major income source of rural poor. In the past, livestock was the economic indicator people who had more number of livestock; he/she was known as rich person in the village. But now a day's livestock is not only an economic indicator. Because of agricultural country, most of the Nepalese people in rural areas have some cattle for their agriculture purpose. So, forestry is necessary for rural people for feeding green grass to their cattle. However the size of livestock are mention by following table.

Table 5.3: Size of the Livestock Holding

Livestock	No. of HHs	Per cent
0	1	0.9
1-2	12	11.88
3-5	66	65.53
6-8	19	18.81
9 and above	3	2.97
Total	101	100.00

Source: Field Survey, 2009.

It is found from the field survey that most of the respondents have 3 to 5 livestock size which contains 65.53 per cent of the total sampled respondents and only 11.88 per cent respondent have 1 to 2 livestock in the study area. One respondent have no livestock, which represent 0.9 per cent of the total household. The livestock of 6 to 8 contains 18.81 per cent and 2.97 per cent respondents have 9 and above livestock on their households. The number of livestock affects to the forestry because who have large number of

livestock, he/she should use forestry more and who have less number of livestock, he/she should use forestry fewer than them for fulfilling their needs.

5.1.5 The Major Source of Cooking Fuel and The Trend of Fuel Wood Consumption

Energy does play an important role in meeting the basic needs. Access to modern forms of energy is a key determinant of the quality of life and the level of social development. Even though modern energy is not a substitute for other development interventions, it contributes to them, and the lack of access to modern energy has been shown to correlate closely with many poverty indicators. Biomass is a main source of fuel. In the context of Nepal almost 75.78 per cent energy is supplied by the traditional sources such as fuelwood, agricultural residues and animal dung. Commercial and petroleum are also a major source of fuel. Energy is essential for human existence and overall development. In the study area, fuelwood was seen as the major source of energy for cooking heating and lighting. The present scenario of fuel in the study area is shown in the following table.

Table 5.4: Source of fuel for Cooking and Consumption Trend of Fuel Wood

Source	HH	Per cent	Fuelwood consumption rate (Bharis per month)	HHs	Per cent
Fuelwood	65	65	5-7	10	9.90
Kerosene	-	-	8-12	36	35.65
Biogas	36	35	12-15	55	54.45
Total	101	100.00		101	100.00

Source: Field Survey, 2009.

According to field survey, all respondents relied on fuelwood as a source of energy for the cooking purpose. Similarly, as the above table points out, 54.45 per cent of the respondents consumed 12-15 Bharies of fuelwood per month, 9.90 per cent of the respondents consumed 5-7 Bharies of fuelwood per month for cooking and heating. It becomes clear from this scenario that deforestation rate is very high in the study area.

5.2   Landholding Size

Land is one of the means of production, which determine the wealth of rural people. Land determine the level of family status. If a household with more land is known to be a higher class family and a family with less area of land is known as lower class family. Then fertile and unfertile land also determines the class of family. Fertile and irrigated lands are better than unfertile and unirrigated lands as wealth. Landholdings size is directly related to the dependency on forest. If a household large over landholding size, his dependency on forest is low. Similarly, if a household has low landholding size, his dependency with forest is high. Landholding size of the respondents and dependency on forest resources in the study area is presented the following table.

**Table 5.5: Landholding Size and the Dependency of the Respondents on Forest**

Land (in Ropani)	No. of HHs	Per cent	Visit to forest (days per month)
1-10	9	8.91	30
10-20	23	22.78	20
20-30	33	32.67	12
Above 30	36	35.64	7
Total	101	100.00	

Source: Field Survey, 2009.

According to the field survey, it is found that most of the respondents have above 30 ropani land which contains the 35.64 per cent and 20-30 ropani land owner have 32.67 per cent which contains the 33 HH. Only 8.91 per cent respondent have 1-10 ropani land.

There was no regular relation with landholding size and using pattern of the forests. User with very few land were heavily depended on forest for whole month of the year. Who have adequate landholding size, they are low dependent with forest. So that higher the landholding size lower the visits of forest and lower the landholding size higher the visits of forests. 22.78 per cent people visits the forest 20 days/month, whereas 35.64 per cent people visits the forest 7 days/month. So almost all people are depend on forests to achieve their fuelwood, fodder and others.

Figure 5.1: Landholding Size and Forest Visits
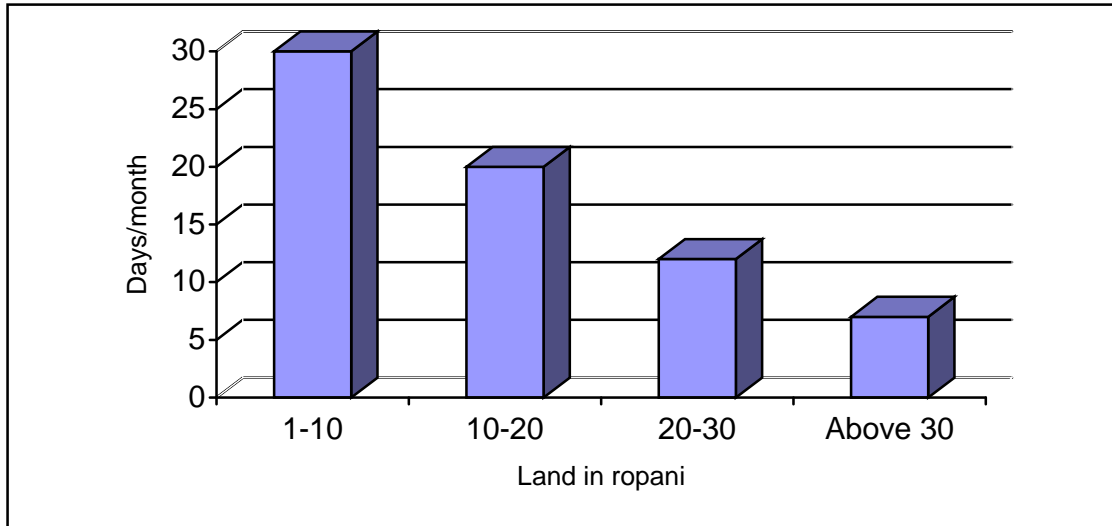
5.3   Plants, Fodder and Grazing Lands

Plants, fodder and access to grazing land for animals are the important bases of survival for rural people. Animal husbandry plays a significant role in economic development in the context of developing countries like Nepal. In the study area, there the people's access to grazing land is substantial. Basically, forests are the place of grazing rather than own land and public grazing land. Before 2050 BS, there was access to public grazing land. But after the establishment of first CF, namely HCF, gradually the local people had started understanding the value of forests and then they began to conserve and preserve the forest, and started afforestation of these areas. At present, there is no separate public grazing land. Now, there has been access to grazing area, namely HCF sector. Because of HCF, its consists of hard, large and big strong trees including bush, herbs, small plants and grass for cattle. So, the HCF is a popular grazing forest for the local people, basically during summer seasons. In this area a variety of plants can be found, namely fodder plants and herbs like *Dabdabe, Kharsu, Ipil-Ipil, Kutmiro, Bamboo, Pinetree, Dudilo, Phalat, Bhakkyamlo, Amalo, Dubo, Banana, Root of eanselu, Bholtapre, Ban Kapas, Padam Chalnu, Sattuwa, Timur, Siltemur* and so on.

Fodder is a basic need for the animals. Most of the respondents collect the fodder for their cattle from public forest (community forests), own land/forests. Because of study area is low in agricultural production and rich in forest resources. So the volume or

density of animal husbandry is very high in this area. In this situation people highly collect of fodder for their cattle. The surviving way of the local people is animal husbandry and vegetable farming. Manner is inevitable for the farming. So the local people have a lot of animals. Both in summer and winter seasons the people collect fodder, fuelwood and leafage. The access to grazing land and the fodder collection pattern can be in the following table:

Table 5.6: Access to Plants, Fodder and Grazing Land

Name of grazing land	No. of HHs	Per cent	Fodder collection season	No. of HHs	Per cent
Forests	37	36.64	Summer	26	25.75
Own land	5	4.95	Winter	40	39.60
Public grazing land	00	00	Summar/winter	35	34.65
No grazing land	59	58.41	-	101	100.00
Total		100.00			

Source: Field Survey, 2009.

According to above table, 37 HHs (36.64%) of the respondents graze their animals in forests (HCF) and 4.95 per cent of the respondents use their own land for grazing their animals. The remaining 58.41 per cent of the respondents do not use any area for grazing their animals.

Among the 101 HHs all collect fodder in different seasons. Among them, 25.75 per cent (26 HHs) respondents collect fodder in summer season. Similarly, 39.60 per cent (40 HHs) respondents collect the fodder in winter season. And remaining 34.65 per cent (35 HHs) respondents collect fodder both in summer and winter seasons. The majority of the respondents (39.60%) collect fodder in winter season.

Not putting the manure back on the agricultural land as fertilizer deprives the soil of valuable nutrients and material which drastically reduces crop production and results in food shortage. So local respondents try to collect more and more fodder to make green manure as well as collection of manure through animals.

5.4   Contribution of Forest Resources in Local Community

Forests are an important renewable NR. They contribute substantially to the economic development of a country by providing a variety of goods and services to the people and industry. Forest are the largest NR of Nepal in terms of land area coverage. Latest data available reveal that the country has 29.0 per cent forest spread over 4.26 million hectare and 10.6 per cent shrub or so called degraded forest occupying 1.559 million ha area. The main products of forest are fuelwood, fodder and timber, and raw material for industries as pulp, paper, new print, plywood, furniture, wood craft and packing articles, matches sports good, and others. These are directly interlink with the local people and their everyday life. Environmental freshness economic prosperity, qualitative agricultural productivity all are directly concern with forest resources. Green forests is the wealth of Nepal. Nepal's forestry sector has been considered as a key contributor to the national as well as human development. Hand in hand with agriculture, forestry plays a significant role in the economic and social life of the rural people.

In the study area, the actual respondents are also effectively affected by use of forests resources in terms of fuel wood, timber, fodder, plants, leafage, raw materials for industry, medicine and others wood biomass is the major product of forests in Nepal. Forest are an important component of our environment that provide a number of ecological services to mankind. They regulate water budget and the hydrological cycle and control soil erosion, moderate flooding and reduce the amount of sediment washing into streams, lakes and reservoirs. Forest purify the air. As a result, contribution of forests is uncountable. So everybody must be sensitive to protect and manage them on time.

5.4.1   Role of Forest in Life of Users of this Study Area

We have already discussed about the importance of forest for the local people, especially rural poor. For Nepal, to achieve the faster economic growth and poverty reduction, it is absolutely necessary to resolve conflict on NR and SFM. If the scheme of SFM system is successful, local people become able to achieve their basic needs.

Farming and cattle keeping were the two main sources of income of the people of the study area. Forests are an integral part of both, farming system and cattle keeping. Forestland is used to graze their cattle, and fodder, leaf litter and bedding materials are obtained from the same forest.

Cattle play an important role to generate income of villagers because they given milk, meat for them and manure for agricultural lands. Only the healthy cattle could meet these basic needs. In order to remain healthy, these cattle are to be feed well. Foods for these cattle come from forest. Compost is prepared from cattle dung and green vegetation from forest. Good soil from forests is found used by some farmers in this area who does organic farming. Moreover, they have to depend exclusively on forest for cooking energy, food and bedding materials for cattle, manure for farming and for even drinking water. Almost all fuel for energy for cooking comes form this forest. Therefore, good forest means they have good opportunity to raise their living standard. Inter-relationship between forest, farming system, and cattle keeping could be understood from the following figure.

Figure 5.2: Inter-relationship among Forest, Farm, Livestock and Farmers

69
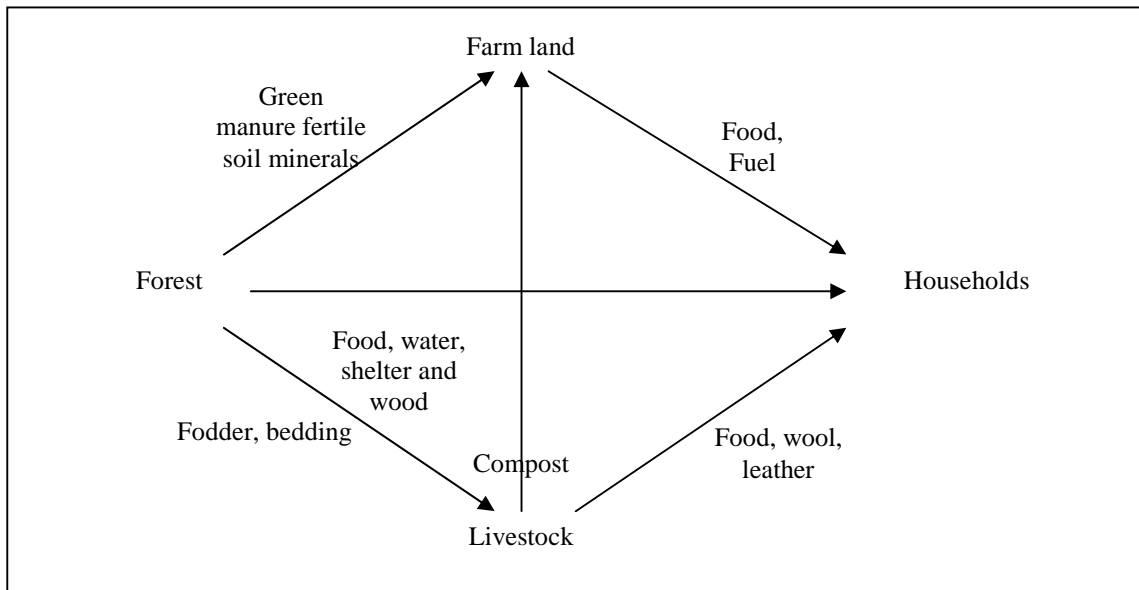
### 5.4.2 Income-generating Activities Based on Forests Resources

There is substantial and consistent empirical evidence that economic growth is a necessary but not sufficient condition for the reduction of both absolute and relative poverty. So small-scale industries based on forests resources should be established at the local level by providing subsidy, training, technical support as well as affordable price of goods and services.

Local people have enormous indigenous knowledge related to flora and fauna. If this knowledge is appropriately used in income generating activities the local people can increasing their earnings. Traditional and small-scale industries should be applicable in remote rural area where there is no accessibility of social overhead capital (SOC). The research area is also deprived of SOC. Therefore, there should be establishment of small industries, export of raw materials including industry-based and medicine-based ones. In remote hilly areas, especially in Kavre district, quite many people are that engaged in self created employment, which are mainly based on forest especially the NTFP. In the study area, some nominal small-scale industries are operating with the help of stakeholders. To supply of raw materials for small-scale cottage industries the forest sector contributes greatly. In the Panchakhal of Kavre district, Allo processing unit is a nice example of community-based small-scale cottage industries. In this area, local people supply the raw materials for paper production at Baglung and Khaniyaghat Kavre, so that both these opportunities help the rural poor to meet their basic needs. Almost half a dozen of women have got job opportunity in this area through the Allo processing. That is why creating self-employment and use of local available resources are the fundamental parts of progress the remote area. Therefore, it is necessary to manage TFP and NTFP to sustain the livelihood of remote hilly area people. In reality some marginal peasants, *Dalit* women and disabled people collect medicine plants and sell them at market thereby earning some cash. And they are also making various tools and equipment for agriculture and daily purposes.

Management of forest and biodiversity could provide many things to community. People, mainly those who are unable to invest cash and are economically very weak,

seem to dependent life sustain on forests to sustain life. The interlink between forests and income generating activities can be shown as in the following figure.

Figure 5.3: Interlink between Forests and the Respondents Income Generating Activities
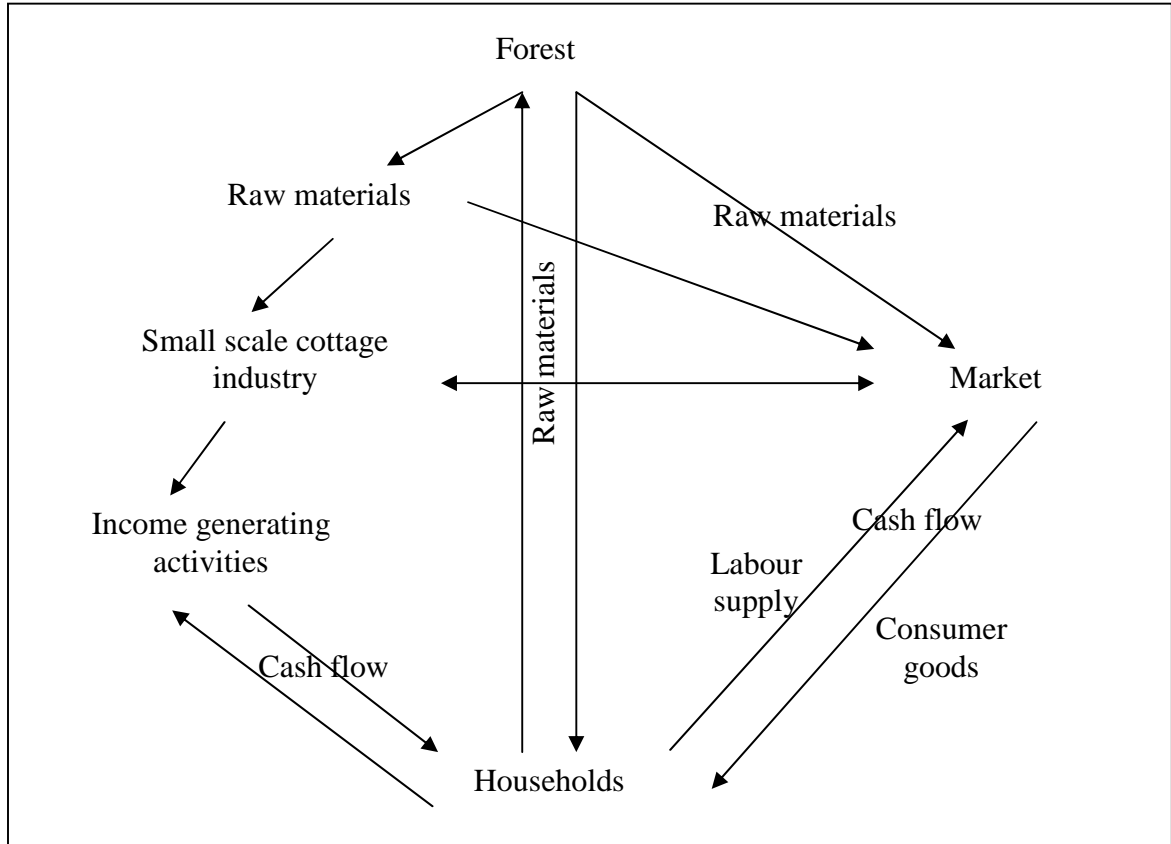
5.5 Nature of Conflict and Its Causes

While analyzing conflict it is found that, there is a wide range of issues. From misunderstanding, disagreement, hostility, verbal exchange, public complaint, cases, physical assault, personal and social dislocations, injuries to social relation, to violence and civil unrest at different levels. In the study area, the nature of conflicts over forest resources are dynamic, short-term and some conflicts are prolonged. The nature of conflict may be described on the basis of utilized, distribution, meeting and racial discrimination. In the study area there were eleven CF. Each CF had its own nature of conflict, because the study area is heterogeneous in terms of caste/ethnic composition. Conflicts also serve as a communication function. Prior to conflict groups may be unsure

about their adversary's position, but as a result of conflict, positions and boundaries between groups often get clarified. In conclusion, the conflict arose for a very short period of time in some FUGs, whereas in some it was for a prolonged period of time (for example Nigalni CF).

According to key informants and the household survey, conflicts were not so complex except in one community forestry. Some conflicts were directly concerned with authority over resources, changes in resource quality and availability, and conflict over access. In reality, the existence of plural legal system in a community is in itself a source of conflict in NR.

In the study area, there were different sources of the conflict. Without any factors, disputes may not occur. Scarcity of resources was the core element to arouse conflict in the study area. Illegal encroachment, misused of available fund, boundary encroachment, racial discrimination, high expose of local elites and others. On the basis of key informant, interviews, household survey and focus group discussions, the problems were found to be mainly related to the following issues: users' identification, political boundary, forestry boundary, decision-making, benefit-sharing, illegal recognition and others.

Table 5.7: Causes of Conflicts

Causes of conflicts	Frequency	Per cent
Suffering by basic needs	74	5.24
Scarcity of resources	67	4.74
Lack of people's participation	141	7.15
Misuse of available fund	101	7.15
Poor leadership	73	5.16
Weak planning	79	5.59
Poor decision-making	101	7.15
Poor implementation of decision	101	7.15
Racial discrimination	36	2.54
Unequal benefit sharing	83	5.87
Boundary encroachment	73	5.16

Corruption by local elits	64	4.53
Change in policy rules and regulation	46	3.25
Norms and rules of FUG not being followed	101	7.15
Domination by members of certain area in FU	66	4.67
Unable to incorporate all the users in FUG	101	7.15
Gap in rules made by FUG with the real socio-economic condition of users	55	3.89
Power imbalance	54	3.82
Clash of interest	36	2.54
Total	1412	100.00

Source: Field Survey, 2009.

Generally, conflict occurs when people have different views or perception about an issue or in a situation when someone's interest is not considered or fulfilled and individuals interest is encroached. The types and level of conflict vary according to situation and issue related with the value of resources. Presently conflict upon NR is mainly related with ownership and power over resource use. The causes of other types of conflict relate mainly to poor leadership, decision-making procedures and poor implementation of decision. Mostly, the major causes of SFM system in the study area are indicated in table 14.

According to the above table, six causes play vital role to create conflict. They were lack of people's participation, misuse of available fund, poor decision-making process, poor implementation of decision, norms and rules of FUG not being followed, and unable to incorporate all the users in FUG, which constituted 49.90 per cent. The second level causes of conflict were: suffering from failure to meet basic needs, poor leadership, weak planning, unequal benefit sharing and boundary encroachment respectively which contain the 27.46 per cent. The third level causes of conflict were scarcity of resources, corruption by local elites and domination by members of certain area in FUG which cover the 13.94 per cent. Among them (causes) racial discrimination and clash of interest have played the nominal role to generate the conflict. These account for 5.08 per cent.

5.6   The Major Actors to Generate the Conflicts

For conflict to occur in any practice, there must be some actors who play the inverse role. It is very important to identify the key actors involved in the conflict and the reasons why they are involved. These questions directly lead to the study of behaviour and actions of these actors. Conflict related to the forest resources does not operate in a vacuum. Human behaviour determines the conflict in NRM and its technical aspects depend on human decisions and activities. The actions and behaviour of people towards natural resources is not shaped and guided by a single comprehensive law. They are guided by several local norms, practices and belief, folk and legal regulations. Present research area was so heterogeneous in term of caste/ethnic composition. The fact is that local people themselves were actors to generate the conflict. Mostly, FUGs, FUGCs, local elites, political leaders, people of neighbouring village, forest personnel, and DFO were main actors to create the conflict in the study area. The major actors of conflict can be shown by the following table.

Table 5.8: Actors of Conflict

Actors	Frequency	Per cent
FUGs	86	29.55
FUGCs	69	23.71
Local elites	64	21.99
People of neghbouring village	39	13.40
DFO	33	11.34
Total	291	100.00

Source: Field Survey, 2009.

Based on the field survey, it is found that most of the actors of conflict were FUGs themselves 29.55 per cent (86 cases). Similarly, FUGC also play great role to create conflict. They compared 23.71 per cent (69 respondents). Local elites, people of neighbouring village, and DFO were also the core actors of conflict. They cover 21.99 per cent, 13.41 per cent and 11.34 per cent, respectively.

Figure 5.4: Actors of Conflict

Legend: FUGs | FUGCs | Local elites | People of neighbouring village | DFO

Pie chart values: 11.34%, 13.41%, 21.99%, 23.71%, 29.55%
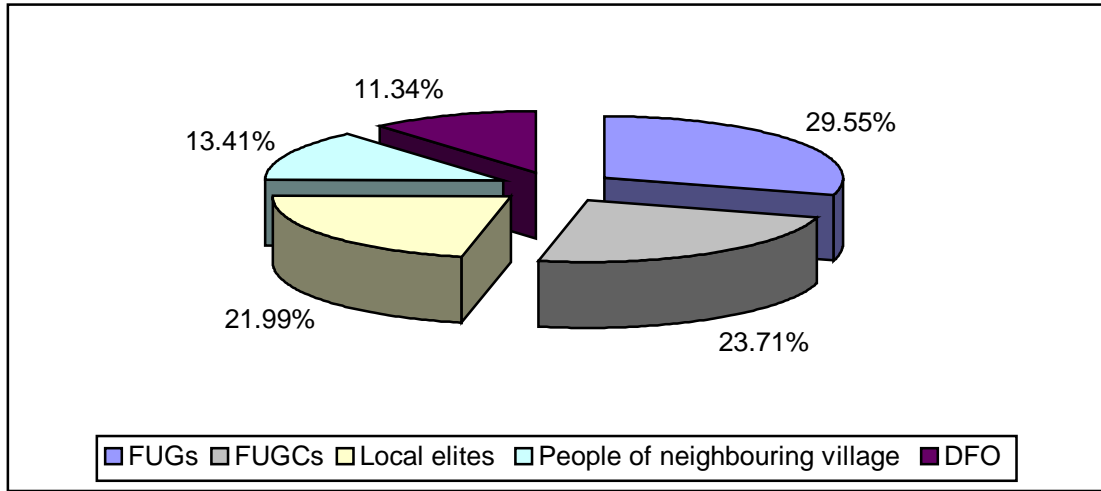
5.7 Method of Conflict Resolution

Where there is a will, there is a way. Similarly, where there is conflict, there is resolution. The study area shared various types of conflicts and the ways adopted by FUGs themselves to effort resolve conflict. They practiced resolution method according to type and nature of the conflict. In some FUGs, potential conflict issues over boundary encroachment had been circumvented through agreements that individuals who had land in and around the forest could use the forest, within a certain distance from their land, as their own forest, although formal ownership and control of the land would remain unchanged.

The principal method to resolving boundary conflicts is to invite the district survey to come specify on the ground where the legal boundary lies. Photo-maps and participatory resource and social mapping could be used as more user-friendly tools to help to identify and resolve land disputes. The potentials for conflict management and resolution are changes in FUGs formation procedure, survey and clear map at hand over, photo maps use, legal advice form district government lawyer, role of DFO, role of networks, splitting of FUGs, awareness-raising or land ownership rights to FUG. Misusing fund was also another cause of conflict. This can be easily solved through consensus, participation, accountability, responsibility, transparency and others. Sarmonious relationship between FUGs and FUGCs members.

Policy level conflict was another issues of disputes on NRM, which can be resolved by adopting the agreeing to rewrite opertational plan as soon as possible between FUG and DFO. The overall authority must be transfered from DFO to local people who are the first consumers of this area.

Benefit-sharing is one the main aspects of conflict in forest resource management. Optimum allocation of available resources and fund, timber, fodder, fuel wood and other things should be equally distributed with mass participation. Some effective ways to solve conflict as suggested by the respondents are presented below:

➢ Participation including tenants, landless, marginal farmers, women, *Dalit* and others
➢ Establishment of a the sound networking
➢ Good information
➢ Forestry education
➢ Improved and inclusive FUG bottom-up planning to include all users would address causes of many of the minor conflicts by ensuring decision reflecting the wishes of users more fully.
➢ Improved conflict resolution skills and mechanism within FUGs
➢ Demarcation of political boundary
➢ Strong decision making process
➢ Regular meeting of FUGC and FUSs
➢ Reduction of poverty through income generating activities
➢ Prepare fund of a sound operational plan (OP)
➢ Negotiation
➢ Effectively launching the CF
➢ All FUGs must follow the rules and regulations related to forest resources
➢ Awareness within FUGs of different users' needs is often poor.
➢ Fulfillment of basic needs
➢ Compromise, consensus, integration and sacrifice
➢ Learning by doing
➢ Meditation, empowerment and intervention

Consideration of the above points may be very helpful in resolving conflict, These are often pursued by the local people themselves

5.8 Outcomes and Consequences of Conflict for Natural Resources and Community

Outcomes and consequences of conflict need to be critically examined to seek an improvement in a conflict situation. Often the outcome of conflict resolution may be an increase in the gap between powerful and powerless. The density of violence was increased since last decades, when the people's basic need not meet through available resources. Population pressure and volume of conflict have been moving same direction. Iron cut iron, poison cut poison similarly, conflict create conflict. Hence, major understanding part is that every conflict cannot hold destructive way. Some conflict may provide various opportunities to the person, society and community. However, conflict on the study area often shown the inverse outcome. Rarely some cases were responds with positive consequences i.e. mass participation, integration, regular meeting process.

Considerable fact is that the quality of outcome and its social implication are more important than the resolution itself. What are the achievement and why are they achievements in natural resources and society as a whole? What are the weaknesses and strength of existing CM approaches and how can they be improved? The answers to these questions will greatly help in devising a proposal for the improvement of an effective CM. There were generally three types of outcome i.e. loose-loose (negative), win-win (positive) and win-lose (one party gains). All three type of outcome depend upon the severity, complexity and managerial approach of the conflict. It is not always possible to bring about a win-win outcome, although a well-planned facilitation may increase its chances.

Time is another important factor to determine the quality of any outcome. Here, outcome means the result of the conflict resolution, who gain and who loses at different levels, from an individual to society as a whole. From the field survey, it has been found that most of the cases of conflict were negative except very few cases. Sometimes conflicts provide knowledge on a time to the local community for the afforestation, preservation, conservation of forest resources. On the basis of nature of conflict they

learn value of natural resources. So that now-a-days local community people are very sincere to SFM system in order to fulfill basic needs of present and future generation.

Both negative and positive consequences of conflict can found in the study area, and they are pointed out as follows:

5.8.1 Positive Consequences

- ➢ Increased trend of bio-diversity conservation
- ➢ Rotation grazing system
- ➢ Regular FUGC meetings
- ➢ Consensus
- ➢ Greater participation of people
- ➢ Afforestation in open area
- ➢ Establishment of fixed political boundary in selected community forestry
- ➢ Review of past/present government policies and their impact on the forest resources on the study area.

5.8.2 Negative Consequences

- ➢ Conflict created more conflict on forest using system
- ➢ Increased racial discrimination
- ➢ Deforestation
- ➢ Increased illegal land encroachment
- ➢ Women, *Dalit* and marginal farmers dominated by local elites
- ➢ Unequal distribution of available resources.

5.9   Ethnic Conflict and Forest Resource Management

Present research area is so heterogeneous in terms of caste/ethnic composition. That's why sometime there can be shown ethnical basis or conflict on forest resources. This area is also more or less rich in NR. The view of respondent's upon ethnical conflict can be found in different perspective. The majority of people in the study area are Danuwar (1854 out of 2993). They dominate the other people or castes. The view of the respondents' can presented in the following table.

Table 5.9: Ethnic conflict on forest resource management

Conflict type	HH	Per cent
Caste-based	50	49.51
Language-based	3	2.97
Education-related	13	12.87
Culture-based	31	30.69
Other	4	3.96
Total	101	100

Source: Field Survey, 2009.

This table shows that there were cultural, ethical as well as other conflicts in term of use and management of forest resources. According to above table 49.51 per cent ethical conflict concerned with caste, it was more than half per cent. Second causes of ethnical conflict shown culture. Language, education and other phenomena are also factor of ethnical conflict which had 2.97, 12.87 and 3.96 respectively.

5.10 Gender Discrimination on use and Management of Forest Resources

Social and gender discrimination are problems and burning issues everywhere. These discriminations are not only in natural resources but also in education, political, cultural and so many other activities. The study area too is not free from these problem. In the case of working women have high scarify than men. Respondent's views can reflect from the following table.

Table 5.10: Gender discrimination on forest resource management

Discrimination	HH	Per cent
Yes	16	15.84
No	60	59.41
Do not know	25	24.75
Total	101	100.00

Source: Field Survey, 2009.

The above table shows that there is no high degree of discrimination. Only 59.41 per cent respondents said there is no gender discrimination in forest resource related activities. But 16 HH (15.84%) of the respondents said that females are dominated by

males in the use and management of forest resource activities. Lastly, 24.75 per cent of the households did not know about it.

5.11 Forest Resources and Social Equity

Forest resources are free award given by nature. So its right and authority should be equal among different level's people as well as caste. Social harmony, equally, participation and empowerment are pre condition to achieve the sustainable forest resource management scheme. To achieve the good economic condition and fulfill the people's basic need, it is necessary to resolve conflict and remove social inequality. Only through the social equality we can achieve the goals of sustainable forest management. The view of respondents' upon social equality can be presented as in the following table.

Table 5.11: Social equality on use and management of forest resources

Social equity	HH	Per cent
Yes	46	45.54
No	55	54.46
Total	101	100.00

Source: Field Survey, 2009.

The above table points out that there is no proportionality per cent (55 HH) respondent's view was not social equity whereas only 45.54 per cent (46 HH) respondent view was on social equity.

5.12 Benefit-Sharing Process

People are facilitated by forest resources in the study area. Most of the people fulfill their basic needs through NR. They can get various kinds of benefits from forest resources such as, green grass, timber, litter, natural beauty and others. Benefit sharing of FUGs in the study area is based on the households.

Table 5.12: Respondent's view with regard to existing benefit sharing process

Benefit-sharing process	HH	Per cent
Yes/agree	62	61.39
No/disagree	39	38.61
Total	101	100.00

Source: Field Survey, 2009.

It is found that most of the respondents were satisfied from the existing distribution system on the basis of household. The proportion of satisfied respondents was 61.39 per cent, and only 38.61 per cent of the respondents were not satisfied from the existing distribution system.

5.13 People's Participation in Forest Resource Management

Self-help management of forest with rural people is potentially one of the most effective ways of sustainable managing forest resources. The real reason for a lack of local participation is that outsiders misperceive local constraints to and attitude towards participation planners and donors need to have more confidence in local people's ability to participate in all stage of activity, planning, implementation and monitoring.

In traditional forest policy local people were considered as enemy of the forests. These policies gave more emphasis on forest protection by barbed wire fences and forest guards. In Nepal people's participation was thought necessary only in 1976 as outlined in the National Forest Policy. In that policy, it is mentioned that people's participation will be sought for protecting forests from fire, theft and abuse. For the purpose of this study, people's participation has been defined as the local people working co-operatively with local resources and sharing the benefits. People's participation creates 'we feeling' in the society. People's participation is also know as voluntary labour.

The Master Plan for Forest Sector (MPFS) was adopted in 1989 with a major shift in forest policy. This plan also gave high priority to people's participation. Accessible forests can be managed by empowering the local community.

5.13.1 User's Participation at Forest User's Group Meeting

The study focuses on the participation of people in the SFM system. Participation of people in the meeting reflected the consciousness level of people about their responsibilities and right on the CF activities. The level of participation on the FUG meeting of the respondents is presents in the table below.

Table 5.13: Respondent's Participation on FUG Meeting

Status of Participation	HH	Per cent
Actively	52	51.49
Passively	13	12.87
Normally	36	35.64
Total	101	100.00

Source: Field Survey, 2009.

Based on the field survey it is found that the highest proportion or 51.49 per cent of respondents have indicated in the active participation in the FUG's meetings. And the role of respondents in FUG's meetings was found normally participation, which contains 35.64 per cent. Nearly 13 per cent of the respondents had passive participation in meetings.

5.13.2 Decision-Making Process

Decision making process is itself a very critical aspect. Decision-making is important matter in the conflict resolution and sustainable forest resource management. Mainly in decision-making process, there are only two criteria. First one is on the basis of the majority of members of FUG where the decisions are passed from the acceptance of the majority of members in the meeting and the second one is by the FUGC. Hence, two types of decision-making processes are in existence in the study area, which can be shown as in the following table.

Table 5.14: Decision Making Process of Respondents

Criteria of decision	HH	Per cent
FUG meeting	76	75.25
FUGC meeting	25	24.75
Total	101	100.00

Source: Field Survey, 2009.

Based on the field survey, it can be seen that most of the respondents accept decision taken on the basis of FUG meetings. Such respondents constitute 75.25 per cent of the total sampled respondents. Similarly, 24.75 per cent of the respondents accept the decision passed through the FUGC. So, the fact is that the decision making process is

quite positive because one third of the decisions are made by FUG meetings, which may be the sign of a good SFM process.

5.13.3 New Decision in Forest Resource Management

New decision can take place reasonable as well as worse outcome. So new decisions point out the future activities for the forest resource management aspect. For implementation of new decision in forest, there are two options. The first is that decisions are passed through the meeting of FUG, and the second is that decisions are taken through the meetings of FUGC. The view of the respondents regarding this has been given in the following table.

Table 5.15: Respondents' Perception of new Decision in Forest Resource Management

New decision	HH	Per cent
By FUG	69	68.32
By FUGC	32	31.68
Total	101	100.00

Source: Field Survey, 2009.

As seen in the above table, the fact is that the new decisions are verified through the FUG meetings because 68.32 per cent of the people's view is concerned with FUG meeting and 31.68 per cent decision are passed through the FUGC meetings.

CHAPTER-SIX
SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1   Summary

The forestry sector plays a central role in the economic and social life of the Nepalese people. Rural people collect seeds, fruits, nuts, roots, shoots, barks, leaves and many more forest products for household use and market. They also prepare household implements such as *Doko, Namlo, Dori, Theki, Dhungro, Dhiki, Mudha, Kucho, Halo, Juwa, Bhakari Mandro* and other items traditionally used in farm households. Forest is essential to protect soil against erosion, providing clean water, reducing landslides, floods, maintaining ecological balance and preventing environmental degradation. Forest resources have massive contribution for the economic growth/development environmental health, fulfillment of basic needs of local poor people. However, many people are not serious about concerning them as they do not fully understand the value of NR and conflicts over their use.

The sayings such as popularly known *Hario Ban Nepal Ko Dhan* and *Charkose Jhadi* reflect and ample of forest in the past. But during 1963 and 1999, the forest cover in Nepal has reduced from 37 per cent to 29 per cent. Many factors contribute to the loss of forest in Nepal. Inappropriate forest policy, forest fire and encroachment are among the main factors for such loss. Rural communities are among the segment of the society who are heavily dependent on NR for the fulfillment of their basic needs. In the name of fulfilling their basic needs, they create conflict over NR. There are various types of conflict arising in local communities for use of NRs.

Conflicts over NRs are developed not only from one single factor but rather due to many others. Conflict however, is a part of development. Conflict usually brings positive results if it is properly handled. If the process of negotiation, facilitation and arbitration are not properly handled there is always a risk of conflict arising within country and between people. Inconsistency refers to the conflict. In general, conflict means one dominant to another on the basis of consumption production, exchange and distribution of goods and services. So conflict refers to the tension, disequilibria, inconsistency, debate, injustice, unbalance, inequality, discrimination and others.

There are specific causes of conflicts over NRs. However, some select causes are: poverty, suffering by basic needs, misuse of available fund, boundary encroachment, poor people's participation, poor decision making process, lack of information, integration and solidarity, change in policies and laws, change in availability and access of resources, scarcity of resources power imbalance, dominate by local elites and others.

Conflict often creates conflict itself. It is a social process. The nature of conflict can be both constructive and destructive. The nature of conflict depends on its variables. Forest resources occupy an important position among the natural resources in Nepal. This gives rise to the establishment of customer laws in the villages and communities. Conflicts mainly produce negative outcomes such as, helplessness and separation, reduced production and productivity, hesitation, deterioration, loss of bio-diversity, deforestation, illegal poaching, and so on. Similarly, sometimes conflict creates positive results also, such as: reconciliation of the interests of the debating parties, consensus, participation, information interaction, efficiency SFM and others.

The study conducted with the objectives to trace out the contribution of forest resources to the local communities points out the causes of conflict in forest management, examines the people's views relating to management of forestry, and the forest resources managed by local people, and describes the process of benefit sharing. The descriptive and exploratory research design was applied to meet the objectives of the study. A stratified proportionate random sampling process was used to collect data from 101 (16.4%) households/respondents among the 619 households. The necessary information was collected from primary and secondary sources. The data were obtained though structured and unstructured questionnaires, key informant interviews, focuses group discussions and participant observation.

The study area is massively heterogeneous in term of caste/ethnic groups. Among them, the majority are Danuwars comprising 62.37 per cent of the respondents. The literacy rate of the study area is 86.99 per cent, which is higher than national literacy rate. Agriculture is the main occupation and source of income of the respondents.

Decision-making and management in FUG is mainly dominated by elites. Participation scheme is not good in case of forest management as well as benefit-sharing

process. However, community forestry is an effective strategy for the SFM system. In the study area, there are 11 CF programs. Among them, HCF is the largest CF, which influenced the majority of local people. CF is a great success in reversing degradation of forests, and putting forest product flows on a sustainable basis. A variety of livelihood benefits have begun to occur for forest user households:

a.   Improved flow of forest products on a sustainable basis
b.   Improve social capital
c.   Improvement in community infrastructure (schools, roads temples, trails)
d.   Livelihood opportunities such as NTFPS collection.

There was close interrelation between forest, farm, livestock and users. Forest plays an important role in maintaining the ecological balance. Physical, social and economic variables such as distance between forest and village, household size, landholding, livestock holding size, and number of users have determined this relationship. Larger distance from village to forest have low frequency to go to forest whereas lower was the frequency to go to forest larger was the size of household and livestock number, higher was the number of visits to forest. But there was an irregular correlation between landholdings and the visit to forest. These variables together with other variables have considerably effected management of forest resources creating conflicts at different levels and sectors.

Management of conflict is not only limited to linear, legal-focused conflict resolution procedures. CM is a dynamic process of adaptation and action resolution of conflict depending on the effectiveness of interaction and actions governed by values, contexts and perspectives. The study demonstrated that government-sponsored NRM systems do not adequately value local NRM practices and, therefore, create numerous conflicts. The politicization of conflicts, elite domination, and resolution procedures directly affect the poor villagers.

6.2   Conclusion

Lack of human values and individual attitude play an important role in creating conflicts irrespective of their education and social status. It becomes complicated if the concerned governmental body does not make decision at the right time, it considerably effects formation of FUGs and its smooth running.

The rule of law and judgment play minor roles in determining CM. The fact is that existing socio-political system, more than any thing else, determines the outcome of conflict. Conflict may erupt for several potential reasons such as diversity and inconsistency in application of customary practices and formal legal procedures different perception of ownership and right, management differences, top down external intervention and other social variables. Local people have their own strategies, mechanisms and approaches to utilize the available limited NRs and resolve conflict. The role of local norms, values, beliefs, knowledge, power, attitude, practices, communication and facilitation, feeling of ownership and property right and spatial factors have effects on CM in the study area.

The central focus of this research has been to examine NR-related conflicts and their management practices at the local level. Besides it, this research focused on contribution of forest resources to the local people and their views on NR as well as. Peoples' adopted ways require special meditation and arbitration skills and negotiation techniques for a higher degree of success. The effectiveness of CM and the achievement of sustainability of NRM depend on active participation of users in the CM process. By looking at the dynamics of conflict, it is found that there is no single form and model to create NR-related conflict in the community. Caste combination in FUGC could also create conflicts. Change in forest policies and unclear forest policies generate a sequence of conflicts in FUG.

Poorer the economy and greater is it socially disturbed. Greater the dependency to the forest, greater is the conflict with such people due to rules and regulations made in operational plan. The subsistence life pattern, lack of employment also could generate dispute on forest resources. Distance from forest to village may also create problems. Misuse of available fund, poor decision-making process, boundary encroachment and unbalance benefit sharing process were the major causes of conflict. CM is a sensitive issue and dealing with it requires special skills. If facilitators fail to understand the underlying principles of CM, success is less likely. Therefore, CM itself is not a mechanical package to be uniformly used in all conflict situations. Success or failure of CM depends on the facilitation process. Effective facilitation enhances flexibility, information gathering, consensus, participation, social harmony, utilization and

interactive learning that may help to resolve conflict. CM is based on a social learning process. It is a community-focused, learning-based and action-oriented methodological approach to manage conflict to improve the performance of NRM. Skills, knowledge, practice, attitude and experience of the community help manage conflict. In the overall context of sustainable resource development, a reduction in population growth and better management of forest resources are urgently needed. Economic and technical supports from the national as well as international institutions should be based on the total needs of the users' groups. FM in Nepal demands the full integration of socio-economic system with innovative technologies and effective political policies.

6.3 Recommendations

Various problems and necessities were identified in the study area. On the basis of the findings of the study, some recommendations can be made, which can make contribution to the further betterment of the SFM scheme. What is true today may be false tomorrow. In the present context the following could be suggested.

6.3.1 Recommendations for the Government

a. Give rural communities greater authority to identify, plan and implement local development activities.

b. Environmental education should be introduced at levels of education systems.

c. Invest more in capacity building, technology-transfer and development.

d. Conflicts have been increasing because of the lack of proper identification of users, encroachment, no proof of ownership and problem with map reading and mapping. User expects support from the DFO for solving these types of conflicts. Proper mapping with established boundaries designating the area to be handed over as the CF should be done with the participation of Users. Also the DFO staff need to be skilled in methods and procedures for negotiation and conflict resolution.

e. Institutional as well as financial support should be providing to the local people for the SFM and eradication of conflict.

6.3.2 Recommendations to the Households

a. For the betterment of fund mobilization and utilization, the treasurer should keep the funds not the president.

b. Focus on equitable distribution from multiple product forest management with first priority on basic forest products and second priority to commercialization.

c. Maximum number of users should be encouraged and involved in the process of decision-making and evaluation.

d. Women and backward lower caste people should be involved in the mainstreaming of the program for better utilization of forest resources.

6.3.3 Policy Recommendations

a. The national policy makers and planners should pay greater attention to the SFM scheme and make effective policy and plan, which could directly address the problems related to forest resources.

b. A clearly written policy should be in line with written contracts in that the latter provide both the proof of agreement among actors and clear record for future reference. So sound policy framework should be established for a fair mechanism for dealing with conflict.

c. Establish a communication system between national policy level, district levels, FUGs levels, and between FUGs to foster consultative policy development and strengthen conflict resolution and democratic functioning.

6.3.4 Recommendation Related to the Market

a. Privatization, liberalization and globalization are the effective terms for economic reform. Under this trend, market can play the effective role. In such a condition, market should be established for small-scale cottage industries promoted in remote areas.

b. Awareness programmes related with natural resources should be established through institutions such as I/NGOs, CBOs and other related agencies.

6.3.5 Recommendations for Further Research

The study area shows great potential for the conduct of many other research undertaking in areas related to their study. Such areas would primarily include the following:

(i)   NTFPs management

(ii)   Irrigation management, and

(iii)   Nursery plantation.

(iv)   Benefit sharing with equity and social inclusion

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APPENDIX-I
QUESTIONNAIRE FOR HOUSEHOLD SURVEY

Date:

1. Household No.:
2. Introduction of the Study Area:
   a. Zone: b. District: c. VDC: d. Ward No.:
3. Name of the respondent:
4. Household type: a. Nuclear   b. Joint
5. Household background

Age (Year)	Male	Female	Total
Below 14			
14 to 59			
60 above			
Total			

6. Household education description

Educational status	Male	Female	Total
Illiterate			
Literate			
Completed school level			
Higher education			
Total			

7. What type of animals do you have?

S.N.	Particular	Numbers
1	Buffalo	
2	Cow/ox	
3	Goat	
	Total	

8. What is the main source of cooking fuel?
   a. Wood   b. Kerosene   c. Electricity
9. How much land do you have?
   a. Bari ……… ropani b. Khet …….. ropani c. Forest ……. ropani
10. Do you have you access to grazing land for your animals?
    a. Yes   b. No
11. If yes, where do you usually leave your animals for grazing?
    a. Own land   b. Public grazing land   c. Forests
12. Do you collect fodder from the forests for your animals?
    a. Yes   b. No
13. If yes, how many Bharies (load) of fodder do your household members collect in a week?
    a. 2-4   b. 5-10   c. Above 10

14. In what seasons and how many months do members of your household collect fodder from the forest?
    a. Winter ………   b. Summer ……
15. How many Bharies of fuelwood will you need in a month? …………….
16. Do you have fuelwood problems?
    a. Yes   b. No
17. In what seasons would you collect fuelwood from the forest?
    a. Summer   b. Winter
18. What kinds of trees do you use for building materials?
    a. Pine tree   b. Cherry tree   c. Chilaune   d. Others
19. Is there scarcity of timber in your village?
    a. Yes   b. No
20. Have you established any small-scale industries?
    a. Yes   b. No
21. Do you export any raw materials to the industry?
    a. Yes   b. No
22. If yes, which materials do you export?
    a. Allo   b. Lokta   c. Herbs   d. Other
23. Do you export timber from the forest?
    a. Yes   b. No
24. Is there any conflict relating to the forest?
    a. Yes   b. No
25. If yes, what are the causes of the conflicts?
    ………………………………………..
26. What is the trend of corruption in forest management by local elite?
    ………………………………………….
27. Who are the main actors for the conflict?
    ………………………………………..
28. Are your deprived in the use of forest resources?
    a. Yes   b. No
29. Are there encroachments in the forest sector?
    a. Yes   b. No
30. What is the nature of conflict?
    a. Prolonged   b. Short-run
31. Is there any cultural conflict in the society concerning with community forestry? If yes, mark the following.
    a. Religion   b. Language   c. Caste
32. Is there any ethnic conflict in your community forestry?
    a. Yes   b. No
33. Do you think that there is any gender exploitation in your village?
    a. Yes   b. No

34. Is there social equity in the village?
    a. Yes   b. No
35. Is everybody getting equal chance to forest products?
    a. Yes   b. No
36. Are there any records of conflict between user groups vs. VDC?
    a. Yes   b. No
37. What may be the effective way of conflict resolution in your forest?
    …………………………………………
38. When was community forestry established in your village?
39. When was the user committee formed?
    …………………………………………
40. How many members are there in the committee?
    …………………………………………
41. How many households are there in the user group?
    …………………………………………
42. How do you participate in the meeting of FUG?
    a. Actively   b. Passively   c. Normally
43. How is the decision made about the forest?
    a. On the basis of FUG meeting.
    b. On the basis of FUGC meeting.
44. How the new decision made about forest?
    a. By FUG   b. By FUGC
45. Now, who have played the role of arbitration for resolution of conflict in forest management?
    …………………………………………
47. Are there any stakeholders involved in the management of FR?
    a. Yes   b. No
    If yes, which agencies take part the management?

APPENDIX II
CHECKLIST FOR KEY INFORMANT INTERVIEWS

– How is the contribution of forest resources for the local people?
– Do all people have equal access to use on forest resources?
– Is there racial discrimination in FUG?
– Is there scarcity of forest resources in fulfilling the basic needs of local people?
– What may be the issues of conflict in this area?
– In your opinion, what are the effective methods for conflict management?
– How is the decision taken to make rules and regulations about forest management?
– How do you participate in community forestry preservation activities?
– Do you sell the forest resources?
– What role does people's participation play in forest development?
– What is the system of distribution of forest resources in this area?
– What are the processes that can be implemented to better conserve and improve the forest?
– Do you have any additional suggestions?