

**FACTORS INFLUENCING PARTICIPATION OF MEMBERS  
OF FOREST USER GROUPS IN COMMUNITY  
FORESTRY IN THE HILLS OF NEPAL**

**By**

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**Dissertation Submitted in Fulfilment of the Requirements for  
the Degree of Doctor of Philosophy in Rural Sociology,  
in the Faculty of Human Ecology,  
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**September, 1995**

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**In loving memory of**  
**my late beloved father Bhuvan Narayan Joshi**  
**who laid my academic career foundation**  
**and**  
**my beloved mother Krishna Pyari Joshi**





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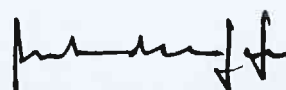
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## LIST OF ACRONYMS

ADB	=	Asian Development Bank
ADBN	=	Agricultural Development Bank of Nepal
CBS	=	Central Bureau of Statistics
CFDP	=	Community Forest Development Programme
DDP	=	Dhading Development Project
DFO	=	District Forest Office
FAO	=	Food and Agriculture Organization of United Nations
FINNIDA	=	Finnish International Development Agency
FUG	=	Forest User Group
FUC	=	Forest User Committee
GTZ	=	Deutsche Gesellschaft Fuer Technische Zusammenarbiel (German Technical Cooperation)
HMGN	=	His Majesty's Government of Nepal
ICIMOD	=	International Centre for Integrated Mountain Development
MFSC	=	Ministry of Forests and Soil Conservation
NAFP	=	Nepal Australia Forestry Project
PF	=	Panchayat Forest
PPF	=	Panchayat Protected Forest
SLC	=	School Leaving Certificate
TRN	=	The Rising Nepal (Daily news paper)
VDC	=	Village Development Committee
UNDP	=	United Nations Development Programme

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September, 1995

Chairman: Associate Professor Dr. Nazaruddin Mohd. Jali  
Faculty: Faculty of Human Ecology

This study examined the extent of participation of members of Forest User Groups (FUGs) in community forestry programme, namely, decision-making, implementation and benefit sharing. The study, which was conducted in the hills of Nepal, also examined the factors associated with participation.

Adopting the survey research method, the pre-tested interview schedule was administered to a random sample of 200 respondents from 10 selected FUGs. Office records, informal interviews, direct observation and small group discussions were the other sources of information.

The forest users who formed a heterogeneous group in terms of their socio-demographic attributes, perceived the current community forestry programme as being a better approach to forest management because of its more people-centred nature. The shifting forest management authority from the government to the FUGs was the most appreciated aspect of the current community forestry programme. Handover of forests was also strongly felt by the local residents as the need for managing forests.

By and large, the level of participation, measured along five clusters of factors, was medium and/or low. High level of participation prevailed only among a small proportion of forest users.

The forest users who had pluralistic organizational membership, who belonged to smaller FUGs, who perceived adequate government support, who had better linkage with their peers as well as executive members of Forest User Committee (FUC) and government forestry personnel; who were better informed of programme activities, and also those who derived satisfaction from community forestry programme, were the more active participants. The study also indicated that those who perceived greater administrative decentralization and empowerment of individual participants as important aspects and those who had favourable attitude towards government intervention also tended to demonstrate a higher level of participation.

The study suggests that the government's commitment to adopt more liberal policy towards administrative decentralization, handover of forests and support to FUGs are, indispensable in an effort to mobilize the human resources more intensively for management of forests. Equally important aspects are: ideal organizational structures of FUG and accountability on the part of the forest users for their action in community forestry.

Abstrak tesis yang dikemukakan kepada Senat Universiti Pertanian Malaysia sebagai Memenuhi Syarat untuk Ijazah Doktor Falsafah

**FAKTOR YANG MEMPENGARUHI PENYERTAAN AHLI KUMPULAN  
PENGGUNA HUTAN DALAM PROGRAM PERHUTANAN  
KOMUNITI DI KAWASAN BUKIT NEPAL**

Oleh

**NEERAJ NARAYAN JOSHI**

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Pengerusi: Prof. Madya Dr. Nazaruddin Mohd. Jali  
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Kajian ini meneliti sejauh mana penyertaan ahli-ahli Kumpulan Pengguna Hutan (KPH) dalam program perhutanan komuniti, iaitu dalam membuat keputusan, melaksana rancangan dan mengongsi hasil. Kajian ini, yang dijalankan di kawasan bukit-bukit Nepal, juga melihat faktor-faktor yang berkaitan dengan penyertaan.

Kaedah tinjauan telah digunakan. Jadual temubual yang telah diuji, digunakan ke atas 200 responden daripada 10 KPH yang telah dipilih. Sumber-sumber lain maklumat termasuk rekod pejabat, temubual tak formal, pemerhatian langsung dan perbincangan kelompok kecil.

Pengguna-pengguna hutan didapati terdiri daripada kelompok-kelompok yang tidak seragam dari segi ciri-ciri sosio-demografi. Mereka menganggap program perhutanan komuniti yang ada sekarang merupakan satu pendekatan pengurusan hutan yang lebih baik kerana ia mengutamakan pengguna. Pemindahan autoriti pengurusan daripada kerajaan kepada pengguna dianggap

satu aspek pengurusan yang paling dihargai oleh pengguna. Bagaimanapun, penyerahan hutan itu sendiri juga dianggap oleh penduduk sebagai sesuatu yang perlu untuk mengurus hutan.

Tahap penyertaan ahli yang diukur dari segi lima set faktor didapati pada keseluruhannya sederhana dan/atau rendah. Tahap yang tinggi berlaku di kalangan hanya sebilangan kecil pengguna.

Pengguna-pengguna hutan yang menganggotai pelbagai organisasi, yang kelompoknya kecil, yang menganggap sokongan kerajaan mencukupi, yang mempunyai hubungan baik dengan kelompok setara serta ahli-ahli eksekutif KPH dan kakitangan kerajaan, yang lebih mengambil berat tentang aktiviti-aktiviti program, dan yang merasakan kepuasan tentang program perhutanan komuniti, merupakan peserta-peserta yang penyertaannya lebih aktif. Kajian juga menunjukkan mereka yang menganggap bahawa pentadbiran yang tidak berpusat dan yang memindahkan kuasa kepada pengguna sebagai lebih penting, mempunyai tahap penyertaan yang lebih tinggi. Demikian jugalah di kalangan mereka yang menampakkan sikap tidak menyangkal campur tangan kerajaan.

Kajian ini memberi gambaran bahawa iltizam kerajaan untuk menggunakan pakai dasar yang lebih liberal terhadap pentadbiran yang tidak bersifat berpusat, penyerahan hutan, dan juga sokongan terhadap KPH, adalah sesuatu yang tidak boleh tidak, mesti ada dalam usaha untuk menggembeleng sumber manusia secara intensif bagi mengurus hutan. Juga sama pentingnya adalah aspek-aspek struktur organisasi KPH yang ideal dan kewibawaan pengguna hutan itu sendiri berhubung dengan tindakan mereka dalam program perhutanan komuniti.





## CHAPTER I

### INTRODUCTION

#### Background

Landlocked between the People's Republic of China in the North and India in the East, South and West, Nepal occupies a total geographical area of 147, 181 square km. The country, which is more or less rectangular in shape, extends 800 km east-west and 130-240 km north-south. It is situated between 80°15' - 88°10' east longitudes and 26°20' - 30°10' north latitudes, along the southern slope of the Himalayas. Beginning from the Himalaya, it extends to the plains which form part of the larger Gangetic valley. The topography varies from the plains of the *terai*, with an elevation of 60-300 metres above sea level to the high mountains of the northern region, rising to over 8,000 metres in altitude with Mt. Everest (8,848 metres) as the highest point.

Ecologically, the country can be roughly divided into three parallel zones extending from the east to the west; the *terai* (flat land), the Middle Hills and the high mountains, covering 17, 68, and 15 percent respectively of the country's total area. Administratively, the kingdom has been divided into five development regions and 14 zones. Each zone is sub-divided into several districts making a total of 75. A district consists of a number of town municipalities and/or Village Development Committees. In all, there are 38 Town Municipalities and about 4015 Village Development Committees in the country.

According to the national census, the total population of the country is 18.46 million with annual average growth rate of 2.1 percent (TRN, 1991). Of the total population, about 94 percent resides in the rural area (HMGN, 1987). Nepal's economy is predominantly based on production from its principal natural resources such as cultivable land and forests. About 61 percent of GDP is contributed by agriculture, upon which 90 percent of the population is dependent (HMGN, 1991). The total cultivated land is approximately 2.6 million ha, and roughly about 50 percent of the rural households own and/or operate less than 0.5 ha of land each.

Forest resources play a pivotal role in the national economy besides their significant contribution to day-to-day life of the people. Forests are the most important resources of the country as they represent a major source of revenue to the government (Joshi, 1985). In the Hills, forests are an integral part of the subsistence farming system and majority of the people use forest products for cooking, heating and feeding livestock. Forest products such as small timber and poles are used to make farm instruments and tools, while tree leaves, and twigs are used as roofing and compost making materials to produce manure. Fuelwood from forests as a conventional energy source contributes 76.44 percent of the total energy (HMGN, 1991). Similarly, the forest alone provides more than 50 percent of the fodder to animals (HMGN, 1987). The forest also supplies the bulk of the fuelwood used in urban areas.

The forest, which was considered as the 'wealth of nation' just a few decades ago, has rapidly deteriorated in recent years. It has been reported that approximately 400, 000 ha of forest lands are cleared every year at the rate of



3 percent annually, thus resulting in devastating landslides and floods in the hills as well as in the *terai* (Rajan, 1991). In 1963-64, the Department of Forest carried out a national survey with the help of aerial photography for the first time. The survey recorded an estimated area of 6,466.9 thousand ha under forest, that is, 56.7 percent of the national total, excluding the Himalaya (Sharma and Amatya, 1978). Presently, the area under forests accounts for only 37.7 percent (HMGN, 1985). Heavy pressure is being exerted on the forest by the ever rising human and livestock population. As a result, Nepal's forests are declining in terms of both quality as well as quantity, and this in turn has aggravated soil erosion, drying up of mountain streams, downstream sedimentation and flooding as well as losses in agricultural productivity (HMGN/ADB/FINNIDA, 1988). Further pressure on forest resources is expected to intensify as human and domesticated animal population continue to grow.

Looking at the present pattern of exploitation of forest resources and resulting problems, the planners have anxiously expressed their concern about the need for judicious use of these resources. It is recognized that if afforestation is not launched in the form of national campaign, the forest areas will be completely denuded in the next 20 - 25 years (HMGN, 1985).

Planned programmes for the development of rural areas were initiated in Nepal as early as in 1952. Since then requisite institutional arrangements from the centre to district levels were established to provide goods and services to the rural people (Dhungel and Dhungel, 1990). However, it was only with the implementation of the First Five Year Plan in 1956, that significant efforts towards planning and development were made in the country.

In the meantime, the modern history of Nepal's forestry sector also began in the same year [1956] with the commencement of planned forest development programmes. Until 1950, about one-third of the total forest and cultivated lands were under *Birta* tenure. *Birta* land was granted by the State and was usually both tax free and heritable. Prior to 1951 a feudal system of land ownership prevailed over much of Nepal and large areas of forest were under the control of political elites. In order to abolish the feudal land tenure system in forests, the Private Forest Nationalization Act was passed in 1957 (Gilmour and Fisher, 1991). This act rendered the people's traditional forest management practice illegal. So, in 1957, ownership of all forests was vested with the Government under the administration and control of the several agencies of the Ministry of Forests and Soil Conservation (ADB/HMGN, 1982) and large tracts of private forests were made public property. However, local communities had access to forests under a system of local communal management (Gilmour, 1984). Unfortunately, despite positive aspects of the Act in protecting and managing the forests, it was largely misunderstood by the people, who believed that the Government alienated their right of free access to and use of the forests.

Under these conditions, villagers ceased to apply any traditional rules for forest management and community responsibility for forest protection disappeared. Fuelwood, fodder and timber were collected indiscriminately and the rate of forest destruction was significantly increased (ADB/HMGN, 1982). In this situation, the government was not prepared to assume the technical and administrative responsibilities of forest ownership (Wallace, 1988). As a



matter of fact, the government, which expected cooperation from the people, failed to explain the significance of this Act to the people (Joshi, 1989).

With this consequence in mind, the government realized the gravity of the situation and decided to adopt legislation emphasizing the involvement of the community in all aspects of forestry activities. The government formally began to redress the effects of nationalization of forest with the enactment of the National Forest Act of 1976 (Messerschmidt, 1985). This Act stated a new policy to involve local communities. This amendment (of earlier 1957 Act) called for the designation of Panchayat Forest (PF) and Panchayat Protected Forests (PPF). These rules and regulations allowed the government to hand over up to 125 ha of bare land to a *panchayat* for planting as PF, and 500 ha of existing forest for management as PPF (Kayastha and Karmacharya, 1987). During the Panchayat system, the Community Forestry Development Project in Nepal was guided by these rules and regulations. One of the most important directives in PF and PPF rules and regulation was that the VDC would act according to the management plan drawn up by the District Forest Office together with the local people (forest committee). But with the end of the Panchayat system in April 1990, both PF and PPF were abandoned and replaced by the term 'Community Forest'. The most recent formal system of management of forest in Nepal is through the development of government sponsored community forests with the involvement of rural communities.

Encouraged by pilot efforts in the Chautara Forest Division in Nepal and the international initiatives in forestry for local community development (including social forestry projects in neighbouring countries), Nepal decided to embark upon an ambitious programme for community forestry on a larger

scale with the aid of the World Bank, FAO, UNDP and other bilateral donor agencies. The project officially commenced in September of 1980 and operated in 29 hill and mountain districts of Nepal (Bhattarai and Campbell, 1985). Currently the project operates in 37 hill districts (Prajapati et al., 1990). Of the several externally assisted projects providing support for community forestry related activities in Nepal, this project is the largest community forestry project in terms of area coverage (Gurugharana, 1990). The objectives of the community forestry project, as outlined in the World Bank and UNDP/FAO project documents, are to: (1) provide for the basic needs of hill communities for forest resources by increasing the production of fuelwood, fodder, timber and poles, and secondary forest products; (2) decrease the consumption of fuelwood through the development and distribution of improved efficiency wood fuel burning stoves; (3) promote self-reliance among hill communities through their active participation in the management of their forest resources; and (4) reduce environmental degradation and conserve soil and water resources.

In 1988 the Master Plan for the Forestry Sector Nepal was introduced and this opened a new phase of community forestry development in Nepal. The provision for community forestry visualized the transfer of responsibility for the decisions, management, protection and control of forests primarily serving the needs of local people to users's group, with some administrative arrangements being agreed by the Panchayat Council (Prajapati et al., 1990). Realizing the slowness in transfer of forest management from the government to user groups, the Eighth Development Plan (1992-97) again aims at

accelerating the transfer process, beside encouraging the forest user group to be more functional and participatory (HMGN, 1991).

✓ The essence of community forestry philosophy in Nepal is the development of a partnership between the local communities and the staff of the Forest Department for the management of local forests. Initially this partnership was established with the local administrative unit called a *panchayat* (Village Development Committee post April 1990), but as these did not represent the real users of a particular forest effectively, the social unit was later changed to a forest user group (Bartlett, 1992).

### **Statement of the Problem**

'The Master Plan for the Forestry Sector - 1988' has laid a strong emphasis on community forestry as one of the strategies for the development of forestry in Nepal. Its key words were 'afforestation', 'people's participation' and 'daily necessities' (HMGN/ADB/FINNIDA, 1988). The present forestry policy embraces community forestry as the cornerstone of its future development, particularly in the hills. But there has been a growing realization of the gravity of problems being encountered in managing forest lands under community forestry programmes due to absence of full support from local people.

Various efforts have also been directed towards surmounting this problem. The National Forestry Plan of 1977 clearly spelled out a new policy for involvement of the community (Kayastha and Karmacharya, 1987). The Seventh Plan (1985-90) as well as the Eighth Plan of His Majesty's Government of Nepal articulate the mobilization of people in massive



afforestation and forest conservation programme as one of the policies regarding forest and soil conservation (HMGN, 1985:126; 1992:41). Reaffirming the emphasis on people's participation, the Government stresses the need for intensification of public participation in development of forestry through the user group-based community forestry programme. Moreover, during the Eighth Plan period, the government has a target to constitute 5,000 user groups and handover 252,000 ha of community forests to such groups (HMGN, 1992).

In fact, people's participation is the basic strategy, to which community forestry programme is committed. It aims at involving people in planning, implementing and decision-making aspects of forest management, development, production and protection. However, despite continuous and conscious efforts towards promoting the level of participation, various reviews have shown that the active participation of the real forest users in the programmes has been quite low (HMGN, 1990). Lohani (1980) pointed to the inability to initiate people's participation in the economic development of the country as the most obvious in the case of forest management.

In a similar spirit, while Malla (1987) described the failure of the programme in terms of involving the actual users in the better management and use of forest resources, Karmacharya (1987) noted a participation level ranging from very good to very bad. He further mentioned the poor level of participation in the forest management planning process. The experience of Gautam and Roche (1987) about community forestry in Dolakha District in Nepal, also showed that people's participation was not successful because of an inappropriate approach. Similarly, the comments of Gilmour (1988) was

that the communities were often treated as passive recipients in the programmes being implemented in the name of community forestry. Likewise, Gronow and Shrestha (1991) described the disappointing progress in various districts and that only rarely people have participated in the planning decision for establishment of nurseries and plantations or management of forests.

The above accounts clearly indicate the problems being encountered in community forestry programme owing to low or lack of involvement of the people. However, neither have explicitly indicated the specific clues for the emergence of such disappointing situations in an empirical manner. Moreover, they have not pointed out the extent of people's participation in other stages of programme such as benefit sharing and evaluation. It is reasonable to expect that there exist certain factors that affect people's participation. Therefore, one of the major concerns of this study is to look, at the empirical level, whether participation can be better enhanced by identifying the factors related to participation. Given the reality that people's participation is a must for the successful implementation of the community forestry programme, this study attempts to address the following questions in the context of the present policy of the government and the situation in which participation of individual members of the FUG is to take place: (1) Is it the heterogeneity among local participants in terms of socio-demographic composition that often lead to variation in levels of participation? (2) Is the existing institutional arrangement conducive to the forest users and the Forest User Groups for participation? These are, in fact some of the issues that have concerned community forestry programmes requiring public support for execution.

As it is now that participation in community forestry programme is to take place through local organization known as Forest User Group (FUG). It is generally accepted that the existence of effective local organization is essential to the success of community forestry programmes. In this regard, Fisher (1992) points out that one of the major contributing factors in the poor performance of community forestry programmes in the past has been the failure on the part of the implementers to understand the sociology of local organizations. It is an established fact that the productivity and effectiveness of local organizations are dependent on many structural aspects within such organizations. This being the likely situation, how these structural factors influence group's performance in the way of public participation also becomes an important aspect that need investigation.

The other aspects that need careful attention are: a communication network that would maintain a constant link for exchange of information between the project implementers and the beneficiaries; an alternative way to settle cultural conflicts between the indigenous forest management system and sponsored system; the physical setting around the project site as well as people's mentality with which participation is to occur. This is because these factors are also likely to influence the extent of public participation in community development efforts.

From the above account, it is quite clear that despite enormous efforts both at the policy level and at the project level, the question of how local participation in community forestry programmes could be promoted still remains a basic question that needs to be answered. Existing literature also clearly indicate that active participation of the local people in the rural



development programmes is the key factor to its successful implementation. Therefore, the present study has been undertaken to probe the participatory role and behaviour of forest users and the factors that influence the level of participation in an empirical manner in the context of community forestry in Nepal.

### **Objectives of the Study**

This is an exploratory study and its general objective is to examine the nature and extent of participation of rural people in various stages of the community forestry programme. The specific objectives of the study are as follows:

1. To examine the general background of members of Forest User Groups, and the Village Development Committees;
2. To study the context of community forestry programme in which participation is to occur;
3. To determine the level of participation among FUG members in various activities of the community forestry programme;
4. To examine the relationships between selected individual attributes and participation in community forestry programme; and
5. To identify the factors that influence participation in community forestry programme.

### **Significance of the Study**

While effective community participation is easily stated as a desired approach in most rural development programme policies, it is not easily implemented. The actors who participate; the context in which participation is

to take place and the mechanism through which participation is to occur are some of the important concerns often stressed in the context of development projects which seek people's participation. Indeed, development programmes whose fate is dependent, to a greater extent, upon the cooperation of the people is in need of a valid strategy that would accommodate the beneficiaries within the frame of its policy.

Gilmour and Fisher (1991) pointed that social processes are fundamental to community forestry, meaning that perspectives from the social sciences must also be given fundamental importance. Since this study aims at a better understanding of the sociology of participation and identification of the factors associated with the overall participation, it can contribute significantly towards building theoretical foundations on people's participation model, testified under a particular socio-ecological setting. As the research findings are based on a systematically conducted study, such outcomes would carry immense relevance to the work of those involved in designing strategies, making decisions and framing policies for achieving objectives of development efforts through people's participation. The findings of the study can also help the implementers to further improve the administrative management effectiveness at the project level. Additionally, the outcomes of this study could also provide clues to researchers in formulating specific hypotheses for the research to be undertaken in similar lines.

### **Limitations of the Study**

This study has confined itself to the understanding of participatory role and behavior of people belonging to remote hilly regions of Nepal. Hence, the

entire finding may not be appropriate in outrightly generalizing to all the agency sponsored community forestry programmes implemented in other settings different from that of the study area. This is because participation in development is a complex phenomenon and cannot be presented in universally acceptable terms (Oakley et al., 1991).

The information generated in this study are based mainly on opinion survey as its research methodology, despite some of the limitations inherent in it, when contrasted with ethnographic approach. However, the study has also availed certain features of the ethnographic method in order to have supplementary and in-depth information about the participatory behaviour of local residents and the factors that are likely to enhance or limit the extent of their participation. Another methodological constraint is that the study is based on a randomly selected respondents of 200. Of course, the reliability of the study would have been further enhanced, had the requirements stated by Krejcie and Morgan (1970), in the table for determining needed sample size of a randomly chosen sample from a given finite population, been met. According to this table, the sample size (200) chosen for the present study should have been drawn from a population of not more than 500. But due mainly to time and budget constraints and due partially to large population spread over vast areas, it could not happen so. Nevertheless, by so doing the design of the study presumes that it has prevented itself from the history and maturation effects, thus enhancing its internal validity, which might not have been possible had it followed the rule of Krejcie and Morgan strictly.

Lastly, this study is not intended to come out with a complete and comprehensive theoretical model of people's participation in social forestry

programmes, rather to contribute to the laying of foundations towards such endeavours. The findings would provide specific patterns and tendencies of human behaviour in the study context, thus allowing further investigations on hypothesized relationship of variables.

### **Definition of Terms**

**Birta:** A parcel of land granted for use without having the revenue obligation, usually to an individual from the aristocracy, for services rendered to the State.

**Community Forest:** It is a national forest handed over to a user group for its development, conservation and utilization for collective benefit.

**District Forest Officer:** It refers to the head authority of a District Forest Office, under the government department.

**Forest User Committee:** An executive committee representing all segments of the user group formed by popular decision. The duties, responsibility and authority of the user group committee are specified in the Operational Plan as agreed between Forest Department Staff, Village Development Committee and User's Committee.

**Forest User Group:** A group of people, generally defined on a settlement or household basis, which is entitled to manage and utilize a community forest. Generally a user group would include those households members who have since long been utilizing a specified patch of forest to meet their basic forest product needs.

**Gender-sensitive Planning:** Planning that takes into consideration the impact of policies and plans on women and is sympathetic to women's need.

**Kipat:** It is a traditional system of land tenure in which residual rights over the land, including forests, reverted to the community rather than to the state or a particular family.

**Management System:** A set of social, economic and organizational arrangements agreed upon by members of a local community for the use and management of local natural resources.

**National Forest:** It refers to all forests, excluding private forests, within the kingdom of Nepal, whether marked or unmarked with forest boundary markers; the term includes waste or uncultivated lands or unregistered lands surrounded by or adjoining forests, as well as paths, ponds, lakes, rivers or streams and riverine lands within forests.

**Operational Plan:** A formal agreement between the users, the Forest Department and the Village Development Committee which specifies all aspects relating to the management of a specified area of community forest, including the regulation of utilization and distribution of benefits. An operational plan is legitimized by the endorsement of the representative of the User Group Committee and the District Forest Office. It contains a description of the forest, the composition of the user group and the rules under which the forest will be managed.

**Panchayat:** It is a political and administrative unit consisting of wards with specified geographical territory and a population of between



and 5,000. With the establishment of multi-party political system since April 1990, the term *Panchayat* has been replaced by the new term 'Village Development Committee'. The Village Development Committee has an elected council, which is headed by a chairperson and deputy chairperson.

**Panchayat Forest (PF):** Any governmental forest area or any part thereof, which has been rendered waste or contains only stumps, may be entrusted by His Majesty's Government to any village Panchayat on prescribed terms and conditions for reforestation in the interest of the village community.

**Panchayat Protected Forest (PPF):** Governmental forests in any area or part thereof, may be entrusted by the government to any local Panchayat on prescribed terms and conditions for the purpose of protection and proper management (Arnold and Campbell, 1985).

In 1990, the end of Panchayat system of government brought a change in the status of PF and PPF. Today, the term 'community forestry' is used to refer to any forest under user group protection and management.

**Panchayat System:** A partyless political system of government, that existed in Nepal from 1960 until early 1990.

**Private Forest:** A forest planted, nurtured or conserved in any private land owned by an individual under the current law.

**User Right:** A locally recognized *de facto* right of access to forest resources. The concept of user is derived from the concept of use-rights. It refers to a specific group of people who share mutually recognized claims to use-right (Gilmour and Fisher, 1991).

**Village Development Committee:** See Panchayat.

**Ward:** It refers to a specific geographical area within the jurisdiction of a particular Village Development Committee. It is the lowest level within the formal political system at which political representatives are selected. There are nine such wards in each Village Development Committee.





## **CHAPTER II**

### **REVIEW OF RELEVANT LITERATURE**

This chapter contains an overview and discussion of past studies and relevant perspectives which have theoretical and conceptual relevance to the present study. The review of empirical literature is also to avail in designing the present study by selecting appropriate methodology, independent variables as well as the construction of conceptual framework. This chapter has been organized into three broad sections. The first section presents the literature on participation. The second section discusses the community forestry. The third section provides the factors related to participation. It closes with a section on conceptual framework of the study.

#### **Participation**

##### **Concept of Participation**

The historical account shows that the participation concept has been envisaged even in the ancient times. Ever since the time of Plato, the Greek philosopher, people's participation in public affairs has been the subject of growing interest in political science. Likewise, since the days of Aristotle, also a Greek philosopher, the emphasis has been laid on democratic government through sharing of office responsibilities (Bava, 1984). Aristotle was of the view that participation in the affairs of the State as a citizen was essential to the development and fulfillment of the human personality. Yet, participation in those days was merely a matter of voting, holding office, attending public meetings, paying taxes and defending the state (Cohen and Uphoff, 1980).

The meaning of participation, however, has changed with the passage of time and the changing role of the State. In the meantime, with the expansion of government, the nature and horizon of participation have widened. In modern times, democracies operate on the principle of indirect participation through representative institutions. The participatory democracy principle guards against totalitarianism, and acts as a bulwark for the general interest of most people, instead of acting in favour of privileged few. Participation of people in the affairs of the State is necessary for a modern welfare state which operates on a bureaucratic system.

The participation ideology or bottom-up approach, originated in reaction to colonial bureaucratic failures in the 1950s, takes the local community as its frame of reference and argues that the efficiency of top-down approach is illusory (Moris, 1981). During the later half of the 1970s and into 1980s, the concept of participation in development became more popular and fashionable, as opposed to the top-down approach (Lisk, 1981, quoted in Kiyoka, 1990). Community participation is now generally taken as a necessary precondition to the successful implementation of any renewal or rehabilitation project (Soen, 1981). In many current rural development programmes in the Third World, the participation of rural people themselves is frequently stressed. Korten (1986), for instance, stipulates that community participation is generally agreed to be important to the long term success of local resource management systems.

The term 'popular participation' has been used in a variety of contexts such as community development, institutional arrangements, operation of administration, worker representation in industrial management, social

mobilization, and political movements. Community participation, citizen participation, voluntary participation, public participation, citizen involvement, public cooperation and collective or community action are some of the terms being used in the literature, to connote the term popular participation.

So far as the meaning of participation is concerned, efforts are innumerable in defining and conceptualizing the term 'participation'. Kolawole (1982) maintains that participation is perhaps the most ambiguous concept which means differently to different people, depending upon the context and the way it is being interpreted. For instance, to the elected officials it connotes controlling the affairs of their fellow human beings, to the public administrators it means an access to the decision-making process, while to the ordinary people it is the right to select their representatives. To Arnstein (1969), quoted in Soen (1981:108), "citizen participation is a categorical term for citizen power ... participation without redistribution of power is an empty and frustrating process for the powerless. It allows the power holders to claim that all sides were considered but makes it possible for only some to benefit. It maintains *status quo*." According to democratic theory, participation represents the process by which goals are set and means are chosen in relation to all sorts of social issues (Bava, 1984).

Opinions differ, therefore, from one individual to another and from one situation to another as to what exactly participation is. The concept of participation is perceived in multiple and divergent ways by various authors. Soen (1981) regards community participation as the means of involving people outside of the government in the planning process, while Fagence (1977) sees

it as a means of reducing power differences, and is therefore, contributory to equalization and social justice. Participation, according to Ramos and Roman, means readiness of both the government and the community to accept certain responsibilities and activities. It also means that the value of each group's contribution is seen, appreciated and used. Mere tokenism and propaganda will not make participation meaningful. The honest inclusion of community representatives as 'partners' in decision-making makes more successful community participation (Ramos and Roman, 1986). White (1981) calls it as involvement of the local population actively in the decision-making concerning development projects or in their implementation. In the version of Oakley and Marsden (1986:18), participation is the means for a widening and redistribution of opportunities to take part in societal decision-making, in contributing to development and in benefiting from its fruits. For Magjuka (1989), participation is a process of joint decision making. Similarly, Smith (1991) is of the view that the term community participation can mean anything from consultation of a few selected power-holders to citizen empowerment through developing responsibilities and decision making options to local citizens.

Indeed, the definitions and concepts given by above authors are fairly consistent. The variation in definition stems from the contexts in which the term participation is being used. Viewed from this perspective, differential definition and conceptualization of the term 'participation' puts us in a state of perplexity to determine it. Therefore to establish a universally acceptable definition of participation would not be possible. However, the definition that

appears most pertinent to the context of the present study is the one given by Cohen and Uphoff (1977:6) who state participation as:

"including people's involvement in decision-making processes about what would be done and how; their involvement in implementing programmes and decisions by contributing various resources or cooperating in specific organizations or activities; their sharing in the benefits of development programmes; and/or their involvement in efforts to evaluate such programmes".

For the purpose of this study, people's participation has been operationalized to mean involvement of members of the Forest User Group in the three stages of Community Forestry Development Programme, namely, decision-making, implementation, and benefit sharing.

### **Significance of Participation**

The growing body of literature pertaining to rural development has stressed the involvement of people as imperative in the process of development. The need for participation of people in different areas has been the central theme of many scholars. According to Fakolade and Coblentz (1981), the rationale for citizen participation is that there is an inherent imperative in traditional democratic theory to warrant the citizen to be a part of the decisions that affect and shape his life. Likewise, Seetharam (1990) advances four rationales for participation. First is the participative process itself which provides identification of problems and needs that form the basis of programme development. Second, it ensures better cooperation from public in developmental programmes. The third rationale is that participation is intended to increase the number of persons using a facility or service. The fourth is the equitable distribution of power among all sections of society.



It is apparent that participation of those concerned is crucial everywhere no matter how large or small is the development programme. This has been revealed by the rural development projects launched in various countries. For example, Karunaratne (1976) describes a gloomy case about one of India's largest community development programmes implemented over the entire country. Despite its bright objectives, the programme resulted in a total failure due to lack of sustained attempt to involve the people and obtaining their participation in the development process. In a similar vein, while Cheong (1987) presents a success story in Korea about Saemaul Undong (New Community Movement), one regarded in many countries as the most effective example of an integrated rural development approach. Brathwaite and Hodge (1987) also, describe a similar story about the Ghanaian Food Aid projects. Both of these authors come to a conclusion that continued involvement of local communities in the decision-making and implementation process is essential for the success of a programme.

The significance of participation has been repeatedly emphasized by various authors. Elucidating the importance of community participation in many fields of development, White (1981) advances ten reasons. The abstraction of these reasons are: (1) with participation more will be accomplished; (2) service can be provided more cheaply; (3) participation has an intrinsic value for participants; (4) participation is catalyst for future development; (5) participation encourages a sense of responsibility; (6) participation guarantees that a felt need is involved; (7) participation ensures things are done in the right way; (8) participation uses valuable indigenous knowledge; (9) participation frees people from dependence on others' skill;

and (10) participation makes people more conscious of the causes of their poverty and what they can do about it. Likewise, Kent (1981), as cited in Hirsah (1990), advocates the advantages of participation in three main logical grounds. They are: (1) contextually, local people know their own social and physical environment and can be expected to use this knowledge to increase the effectiveness of decision-making; (2) practically, participation in planning and decision-making enhances the probability of participation in implementation, where imposed programmes may be ignored or avoided; and (3) morally, people have a right to take part in making decisions that affect their own lives.

Much in the same line, Conyers (1982) identifies three main reasons for considering popular participation as important. They are: (1) it is a means of obtaining information about local conditions, needs and attitudes, without which development programmes and projects are likely to fail; (2) people are more likely to be committed to a development project and preparation, because they are more likely to identify with it as their project; and (3) in most countries participation is considered to be a basic democratic 'right' and that people should be involved in their own development. Conyers feels that people have rights to some say in determining the sort of development which should take place in their country, and particularly in their own local area. This is what he means by the concept of 'man-centred' development in which development is for the benefit of man rather than man being merely an agent of development.

As other authors, Kiyoka (1991) makes a note of the merits of popular participation in various activities of development programmes. These merits

are summarized as follows: (1) By participation of the community in decision-making process, such as selection and design of a project, errors likely to be committed by an outsider can be prevented; (2) Participation in implementation will reduce the cost of the project by the beneficiaries' resource contribution such as labor and cash, and make the beneficiaries' more conscious with the development of their own livelihood; (3) Participation in benefits will ensure the proportionate distribution of project benefits among those who participate in the implementation; and (4) Popular participation in the evaluation of a project allows the project to be evaluated based on the standards of the beneficiary and offers the same advantage as mentioned in (1).

Clearly, beneficiaries' involvement in their development programme is imperative for its success. But in the management of large tracts of Nepal's forests, difficulties have been encountered in obtaining people's cooperation. The major problem is as much a social as it is physical one. So, unless the planners and managers of the development projects clearly realize the importance of participation and unless the intended beneficiaries are somehow involved in the matters that are likely to affect their lives, it is obvious that the outcome of development programmes will turn out to be different from what is being expected.

### **Level of Participation**

Various typologies with regard to the level of participation in development programmes have been developed by a number of scholars. It is therefore essential to understand the level of participation so as to determine the extent of involvement of those concerned. One such level of participation



has been identified by Arnstein (1969), quoted in Soen (1981), who distinctly classifies participation into hierarchies. The author arranges the levels of participation in the form of a ladder with eight rungs that are further grouped into three categories. The rungs range from spurious types of non-participation at the lower level (i.e., the first rung) to more serious and genuine type of participation (power) at the upper (i.e., the eighth rung) level.

Explaining the above ladder, she further states that the first two rungs are: (1) manipulation and (2) therapy. These two rungs are grouped together at the bottom representing the lowest level of participation to describe levels of 'non-participation'. The real objective is not to enable people to participate in planning or conducting programmes, but to enable power holders to 'educate' or 'cure' the participants. The next two rungs are: (3) informing and (4) consultation to label as 'tokenism' which allow the have-nots to hear and have a voice. But participants still lack the power to ensure that their views will be heeded by the powerful. There is no follow through at these levels of participation and hence no assurance of changing *status quo*. Rung (5), placation, is a higher level of tokenism, because the ground rules allow the have-nots to advise, but retain for the power holders the continued rights to decide. The level of citizen power with increasing degrees of decision-making follows further up the ladder is rung (6), partnership. This level enables the participants to negotiate and engage in trade-off with traditional power holders. At the apex of the ladder, delegated power and citizen control, rungs (7) and (8) respectively are the levels at which the have-nots obtain the majority of decision-making seats, or full managerial power.

The significance of the ladder described above illustrates that as one proceeds down the ladder, participation becomes more ineffective and vice-versa. This is because each of these rungs corresponds to the extent of power in determining the end product.

By laying the emphasis on the importance of differentiating between the levels of responsibility in participation to attain greater clarity and direction in determining goals in community programme, Johnston (1982) identifies six levels of responsibility in participation. The levels of participation identified by him are as follows:

(1) Participation in response to an order or force: Participation in an activity in response to coercion by an authoritative figure is the lowest level of participation. Here, the people are denied any share in decision-making, merely complying with predetermined plans by providing material, labour, or even votes and people are made to accept the programme.

(2) Voluntary participation stimulated by a reward: This level of participation is considered a little superior to the first one as the people have the opportunity to show their discretion to decide whether or not to participate.

(3) Voluntary participation promoted by awareness: This level of participation is more responsible than the previous ones. In this case, people become aware of the positive aspect of the programme, its impact on their own development. This leads them to participate in the programme.

(4) Participation by giving suggestions and making criticisms aimed at improvement of an activity: Here people have the opportunity to analyze the

proposal prepared by the government and offer their suggestions for modification of design and suggests ways in which the community can be organized effectively into groups for implementing the plans. These people assume a critical attitude and are prepared to make suggestions for improvements and changes.

(5) Participation by taking initiative: In this stage the members of a community take the initiative in promoting a new activity and assume responsibility for carrying it through successfully.

(6) Participation through creativity: This is considered the highest level of participation where people develop a comprehensive programme according to needs identified by the community. Their participation involve analyzing the situation, prioritizing needs, planning, implementation and evaluation. They are creative and their participation provides a way in which a community can eventually assume full responsibility for its own programme.

The analysis of the above six levels of participation implies that relatively higher participation is expected in situations where people are relatively creative and voluntarily involved in designing programmes based on their own needs. On the contrary, imposition of force in the process of community participation is less likely to achieve people's participation in development projects. The author's contention is that people should be given opportunity to participate in a more responsible way. This is because the primary aim of community-based programmes is to promote human development and this can only be achieved if people participate at increasingly responsible levels in the activities.

Another typology of participation is posed by Wandersman (1979), quoted in Wandersman (1981). This contains five different types of participation that vary in user control of decision making. They are as follows:

(1) Creation of parameters and objects: In this type, the user has full power in decision-making and can generate plans even without preconceived parameters from professionals or others.

(2) Self planning: Here also the user has the power to generate alternative plans but he or she has to do it within available parameters. For decisions, the user has the responsibility and power to make decisions. The role of professional is just as a consultant.

(3) Choice: At this level, the power of user is greatly reduced. This is because the user is supposed to make choice among those alternative plans developed by professionals or government officials.

(4) Feedback: The user's participation in this case is just to express his or her ideas and opinion about a plan being generated by the professionals or government officials who possess the responsibility and power of decision-making.

(5) No participation: The user has nothing to do with decision-making. The decisions regarding plans are made by the professional or government official for the user.

The extent of participation in such types ranges from a very high degree of dominant role of people in decision-making and designing to a level of

almost no involvement in any of the programme activities. In other words, most of the typologies could be fitted between the continuum of two extremes, that is, the most democratic approach of bottom-up at one end and the most centralized and authoritarian top-down approach at the other.

### **Types of Participation**

Various authors have presented different types of participation that are likely to take place in development programmes. While some have presented relatively comprehensive ones, others have done it in abstract forms.

Dusseldorp (1981) describes relatively comprehensive types of participation based on nine principles which are of completely different nature. The classification principle and the types of participation under each of these principles are as follows:

(1) Degree of voluntariness: The types of participation under this principle are free and forced participation. Free participation takes place when a person involves himself/herself on a voluntary basis in a specific activity. Again, free participation is divided into two categories, namely, spontaneous and induced. Spontaneous participation takes place when an individual starts to participate on his own conviction without being influenced via extension or persuasion by other individuals. Induced participation takes place when a person starts to participate after he is convinced via extension programmes or other influences to voluntarily participate. Forced participation takes place either by law or resulting from socio-economic conditions. One of such type is that an individual is forced via regulations or laws against an



individual's own conviction and without his consent. The other type is that an individual is compelled to participate because of person's socio-economic condition either for his own or his family's sake.

(2) Way of involvement: The involvement of a person in project activities may be direct or indirect. Direct participation means an individual himself performs a certain activity in a participatory process. On the other hand, indirect participation takes place when a person delegates his participatory rights to another person, instead of involving himself, so that the latter can participate in project activities on the former's behalf.

(3) Involvement in the various stages of development process: The types of participation under this principle include complete participation and partial participation. When a person, directly or indirectly, is involved in all the stages of planned development process, it becomes a case of complete participation. Partial participation is a case when an individual is not involved in all the processes.

(4) Level of organization: There are two types of participation under this. One is organized participation and another being unorganized participation. Organized participation takes place when an organizational structure and a set of procedures are developed or are in the process of preparation. The organization can be highly formalized with printed laws and by-laws. The type of participation under such condition becomes formally organized participation. If no such conditions exist and involvement of individuals is on the basis of a consensus, then it is termed as informally

organized participation. Unorganized participation is usually of an *ad hoc* nature and the participation is on the basis of the urgency of certain events.

(5) Intensity of participatory activities: Frequency, duration and range of project activities involved are the indicators which explain the intensity of participation. Hence, the participation of an individual could be either intensive or extensive. Intensive participation is a case when the frequency and regularity of participatory project activities are high. Usually it is measured in terms of quantitative dimension of participation. In contrast, extensive participation takes place when there are irregular participatory activities with long intervals.

(6) Range of activities that can be influenced: This type of participation could be either unlimited or limited in nature. When all forces, controllable by man, influencing a certain community can be controlled by and subjected to the participatory activities of members of the community, then it is termed as unlimited participation. When via participatory activities, only part of the social, political, administrative and physical environment can be influenced, then it is termed as limited participation.

(7) Degree of effectiveness: Two types of participation can be distinguished on the basis of this principle. They are effective participation and ineffective participation. Effective participation are those participatory activities that have resulted in the realization of all the objectives for which the activity of participation was undertaken. In contrast, when none, or only a small number, of the objectives are realized for which the participatory

activities are started, such a participation is referred to as ineffective participation.

(8) Who is participating: Here the participation is based on the types of persons involved in project activities. The categories of people who can participate are: (1) members of the local community (local residents and local leaders), (2) government personnel (resident in the community and non-residents), and (3) outsiders (resident in the community and non-residents) and the elected representative of the community.

(9) Objectives and style of participation: The types of participation under this category include: participation in locality development, participation in social planning, and participation in social action. Locality development is identical to community development and aims at involving the people in their own development. One of its goals is to stimulate participation and by doing this to generate social energy that can lead to self-help activities. In social planning, the administration formulates certain task goals and the main purpose of involving the people is to gear the programmes as much as possible to the felt needs and to make the programmes more effective. The main purpose of social action type of participation is to shift the power relationships and the access to resources. The main focus is on a segment of a community.

The above-mentioned classification of types shows how participation occurs in various dimensions of a project. Almost in the same fashion, Cohen and Uphoff (1980) also describe several ways in which participation occurs, such as: (1) whether the initiative for participation comes mostly from above or from below, or (2) whether the inducement for participation are more



voluntary or coercive, (3) whether it occurs on an individual or collective basis, with formal or informal organization (4) whether it is direct or indirect participation, (5) whether it is once-and-for-all, intermittent or continuous, (6) whether it extends over a broad or narrow range of activities, and (7) how much capacity people have in order to obtain the results which they intend to obtain from their involvement in decision-making and implementation.

In the context of development administration, Bava (1984) presents three types of participation, namely, consultation, cooperation and association. By consultation, the author means that the administration seeks public opinion in the preparation for its design and sets line of conduct with a view to safeguard public interest. Cooperation refers to a situation where participation in the conduct of administration affairs results in the creation of joint directing organ, distinct from the existing administrative authority. On the other hand, if public participation does not bring about any change in the essential character or position in the administrative structure through which participation is effected, then it becomes a case of association. In other words, association is the process by which the citizen participates in the performance of administrative activities as a part of the management process. This kind of participation often takes the form of cooperation of citizens individually or as representatives of organizations, into executive committees or commissions set up by the central or local administration.

More recently, Sherraden (1991) has come to make a distinction between formal community participation and informal participation in health services in rural Mexico. According to her, formal participation is official and sanctioned

by government agencies that may include official arrangements with local communities to donate land or building space or labour. On the other hand, informal participation is unofficial and unsanctioned. Also, informal participation occurs outside the officially designated formal structure of participation.

The community forestry programme of Nepal considers participation as its main strategy, wherein community's participation in various stages of the project forms the focal point. Given a set of types of participation, the intensity of participation has also to do with the types of participation available to the participants. For example, Adeyokunnu (1979) suggests that in order to ensure effective rural transformation, the participation of the people should be ensured (through persuasion and not coercion) right from problem identification through formulation of plan and implementation of the programme. This premise of the author is based on the failure of a Nigerian project that forced farmers to volunteer.

Discussion thus far has clearly provided a clearer insight into the various aspects of participation. In accounting participation in development programmes, it becomes essential to understand its dimensions as well as the stages of development activities. This is because experiences through historical and cross-cultural analysis have shown that various segments of social systems are involved in different development activities with varying degrees in a variety of ways and means. Therefore, a holistic approach encompassing all the relevant aspects of participation discussed above might aid in better understanding the mechanism of involvement of target beneficiaries in the activities of development programmes.

## Community Forestry

### Concept of Community Forestry

The concept of community forestry emerged in response partly to the failure of the forest industries development model to lead to socio-economic development, and partly to the increasing rate of deforestation and forest land degradation in the Third World (Gilmour and Fisher, 1991). The literature shows that, whenever the issue is on the involvement of people in management of forest land - social forestry, community forestry, people's forestry, village forestry, forest for the community and forestry for local people are the terms often used. For example, FAO (1978) uses the term social forestry interchangeably with "farm and community forestry" and "forestry for local community development". Whatever may be the terms being used, these terms represent human factor as the major element. Therefore, Noronha and Spears (1985) note that the meaning of social forestry cannot be gathered on the basis of the range of activities carried out under the projects. This is because the novel essence of these projects lies in the word 'social', that is, the projects serve local needs through the active involvement of the beneficiaries in the design and implementation of the reforestation efforts and the sharing of forest produce.

Noronha and Spears (1985) take a different approach and distinguish between social forestry and commercial forestry. In their view, the thrust of social forestry differs from conventional and commercial ones in three respects: (1) it covers the production and use of forest products in a sector of economy that is mainly non-monetized; (2) it involves the direct participation

of beneficiaries; and (3) it implies different attitudes and skills on the part of the foresters who have to shed their role as protectors of forests against the people and work with people for growing trees. Ahmad and Haris (1988) also differentiate community forestry from conventional forestry which concentrates on commercial and industrial forestry, calling for a single product management of large tracts of forest, over a long rotation, by a highly centralized authority. On the other hand, community forestry calls for a multiple use of product management of small tracts of forest and trees, over shorter rotations, by decentralized authorities primarily for the good of the people.

Indeed, community forestry is a concept which expressly recognizes that tree plantation activities involve the mutual interest and decisions of both the government and the rural population (Bhargava and Ping, 1988). In recent years, social forestry has emerged as one of the latest in various participatory approaches to rural development (Okamura, 1986). Of late, it has gained more and widespread recognition in the management of forest lands, particularly in the developing countries where use of forest products by native people for domestic purposes is more prevalent.

Many professionals have defined community forestry in a variety of ways. FAO (1978) defines community forestry as any situation which intimately involves local people in a forestry activity. Likewise, Pardo (1985) describes social forestry as referring to any situation which closely involves local people in forestry or tree growing activities for which people assume responsibilities and from which they derive direct benefit through their own efforts.

In the context of Nepal, Gilmour and Fisher (1991) define "community forestry" as the control and management of forest resources by the people who use them for their domestic purposes and as an integral part of subsistence and peasant farming systems. Similarly, Inserra (1988) defines community forestry as management of forests by the local people who depend on them for fuelwood, fodder, timber, food and raw materials for use in cottage industries. The basic tenet of community forestry in Nepal is that the forest should be managed by those who utilize it. The most recent system of recognizing and encouraging the management of local forests by rural communities in Nepal is through the development of government sponsored community forests, which are defined as those forests entrusted to user groups for management and utilization (HMG/N/ADB/FINNIDA, 1989).

From the views expressed above by various authors, it appears that the central theme of community forestry is the involvement of people in forest management for their welfare.

### **Objective of Community Forestry**

✓ The general objective of community forestry programmes is to enhance the socio-economic and ecological condition of people whose lives are affected by forests. However, the specific objective of community forestry may differ from one region to another, to which it is referred. In peneinsular Malaysia, the objective of community forestry is more towards the creation of a greater awareness upon the public on the importance and multiple values of the forest (Haron, 1988). But in Sarawak (Malaysia), it is visualized as a multi-dimensional concept to release the pressure on forests through better land-use



planning of non-crop area, acquire local self-sufficiency in fuel, fodder and small timber, generate on-farm employment and raw materials for local cottage industries (Noweg, 1990). Likewise, in Indonesia the objectives of social forestry are to prevent environmental degradation and improve environmental conditions where necessary; to improve the socio-economic conditions of forest based communities and to curtail illegal and destructive activities on forest lands (Nasendi, 1990). In the context of South-east Asia as a whole, the term community forestry covers the whole gamut of forest activity, from all types of production (fuelwood, wood products and non-wood products such as seeds) to environmental protection, to forest resource and wildlife conservation (Seymour and Fisher, 1990).

In Nepal, particularly in the hills and mountains, community forestry activities are based on the intimate relationship between farming systems and the forest areas that provide many of the inputs for agriculture, as well as fuel, fodder and building material for villagers (Shrestha, 1992).

### **Participation in the Context of Community Forestry**

Quite similar to participation in other rural development efforts, the basic premise in community forestry is that its success depends upon the involvement of the local people in various stages of project implementation. In managing forest lands, the social forestry models incorporate the ideas about participatory approaches, community mobilization, decision-making process, felt needs and self-reliance. The logic behind the social forestry approach is that participation by the target group of the project is considered as an essential condition for successful afforestation. In the words of Bastiaanssen and

Brinkman (1988), one of the most important characteristics of social forestry is the attempt to involve local people in forest establishment and management, and aim at meeting local needs for forest products.

There are certain requirements of participatory programme which should be taken into consideration for the practice of planning and management of community forest lands. Experiences from various community forestry projects indicate that there are three conditions that need to be fulfilled for villagers to become involved in the forestry process, to analyze, to discuss, to interact, and to plan (Gronow and Shrestha, 1991). The conditions described by Gronow and Shrestha are: (1) the outsiders encouraging them to participate are doing so in the villagers' best interests, in a spirit of respect, commitment and support (and are acting within a government remit); (2) they have equal rights to take part in decisions about the resources and that consensus can be reached; and (3) they have secured rights to the resources and will therefore receive any and all benefits that accrue.

It is evident that despite clear-cut policy, and the principles based on the empirical studies indicating the necessity of involvement of people, much has been said about the imbalance between the forestry programmes and people's participation. These, in fact, are the ironies of social forestry programme that affect its implementation. Pointing out the problems of management of community forestry in Indian situation, Sen and Das (1987) assert that villagers are rarely consulted at the pre-planting stage, and the preparation of a feasibility report, and selection of sites and species is generally done by the local forest officials.

The above situation leads to two basic questions: what kind of participation is expected from the people and what will be the role of concerned government department in creating a participatory environment. In this regard, Sen and Das (1987) put forth two possible alternatives for management of community forestry with people's participation that emerge from the concept of social forestry. One of the alternatives is to look at the major operating tasks in community forestry and see at what stage people can participate in it. The operating tasks are: (1) nursery raising, (2) land preparation (digging of pits), (3) watering, (4) weeding, (5) fertilization, (6) protection, and (7) exploitation. The people's participation in this case is only in terms of wage labour and no scope of involvement in the decision-making process and management which is done by the forest department.

The second way is to involve people in all the major management functions of community forestry right from the planning stage. These include: (1) selection of land, (2) planning and deciding what to raise, (3) organizing planting operations, (4) managing (maintenance and protection) the plantation, (5) distributing the produce after exploitation, and (6) marketing of surplus, if any. These functions have to be carried out by the people themselves with forest department's contribution mainly in the form of technical assistance.

Sen and Das (1987) stipulate that the mechanism of management of community forestry being practiced by the forest department is a combination of two alternatives, in that the department undertakes management activities for a few years with very insignificant involvement of people. It is only at the later stage that the project is handed over to the people with complete freedom of decision regarding maintenance, protection and exploitation of the



established project. The emerging problem with this kind of management is that since the local people were not involved from the very beginning, they failed to perceive the project as their own assets designed to meet some of their felt needs. Consequently, the established plantations were destroyed after handover due to unsystematic exploitation by the local people.

Implicit in the above discussion is the participation of people in all the stages of community forestry programme. However, genuine participation goes beyond the mere contribution of labour and other inputs into the projects initiated from outside the community; it also involves decisions being made and plans being formulated at the community level and benefit shared. It is therefore, implied that community's task is not just to comply with whatever nationally set priorities and extend cooperation in activities that have been stipulated by the government officials.

The current forest policy of Nepal articulates that the government may hand over any part of a national forest to users' group in the form of a community forest for development, conservation, management and utilization of such forest in line with the terms and conditions stated in an operational plan. Given this policy, there is a need to examine whether there has been radical change in the concept of community forestry in contrast to all previous conceptions of community forestry, in terms of involving local population to plan, and implement the project for mutual benefit.

### **Factors Related to Participation**

✓ It is a principle that participation of concerned people is a necessary, if not sufficient condition in order to achieve success in rural development

programmes designed to improve the quality of life of the people concerned. Despite this accepted principle, the review of literature indicate that creating effective participation is not an easy matter as people's involvement in such programmes is often influenced by various factors, thus resulting in varying degree of participation. In the literature, a complex assessment of variables that influence a person's participatory behaviour have been well documented. This section deals with the variables, as determinants of participation, that have relevance to the present study.

### **Socio-demographic Factors**

Rural people do not necessarily constitute a homogeneous economic and social unit (Oakley et al., 1991). Similar is the view of Gilmour and Fisher ((1991) who acknowledge that a community of residence is unlikely to be homogeneous in terms of wealth, landownership, occupation and religion. The members of a social system differ in terms of their socio-psychological and economic characteristics. Hence, it may be expected that the behaviour of individuals towards a particular stimulus is also likely to be divergent depending on their socio-demographic characteristics.

In many studies of participation, the association of participation level with certain socio-economic variables has often been reported. Variables such as occupation, income, education level, place of residence, age, gender, marital status, length of residence, socioeconomic status and organizational membership, have been described by Nelson et al. (1960) as major determinants of both rates and types of formal participation. The others who state many of these factors as having significant association with participation

are Bauder (1958) and Oliver (1984). In a study of members of Village Development and Security Committees in four peninsular Malaysian states, Alang Perang (1977) found a significant and positive relationship between participation and years of education, cash income and number of non-political organizations with membership. However, he reported the relationship between participation and variables like age and farm size as insignificant. Gasson (1977), in his study of farmers, found a significant and positive association of farm size and area of vegetables with participation in vegetable cooperative activities. Similarly, the study of members and non-members of rural organizations (*panchayat*, cooperative societies, *mahila mandals* and youth clubs) by Santhanam et al. (1982 and 1984) observed a trend indicating the increased participation with the increase in the educational level.

A significant relationship of factors such as literacy, occupation, farm size, status of private holdings, households with and without off-farm earning members, and income with participation in community forestry has been reported by Sharma (1989) in an evaluation study of village people of *Dadhikot* and *Diwakot* Village Development Committee of *Bhaktapur* District of Nepal. The same study, however, found the insignificant relation of age and ethnicity of the respondents with participation.

### **Institutional Factors**

The theory of participant citizenship asserts that active involvement of citizens in the political and administrative processes of the social system is essential for the development of the individual members and the system as a whole. Before the advent of the modern nation state, an individual was merely

a member of his family or community and his identity as a citizen was not recognized, hence he had no opportunity of influencing policy to which he was subjected (Bava, 1984). Later with the emergence of modern nation-states a person's living in society, as he or she grew older, is guided by informal institutions such as family norms and social system indigenous to him or her. He or she is also governed by the legal norms and policies of the nation to which he or she belongs. The modern nation-state now accords recognition to the 'civic status' of its members.

Like any other social institution, the State is defined in part by the social functions assigned to it to perform. In a sense, State is the institution charged with the responsibility for maintaining order and stability in a society (Johnson, 1986). Furthermore, the author mentions that since the prime function of the state is to maintain the cultural ideas and social structures that make up a social environment, the State inevitably plays an important role in social conflict and the perpetuation of social inequality.

Bureaucratization of participation is another aspect of current rural development projects. Hence the participation of target beneficiaries of rural development projects also needs to be understood in a given political system. This is because, as Oakley (1980) states, participation is essentially a political act. However, it is often stated that in the modern nation-states, social services are usually prescribed centrally but delivered locally to answer human needs and wants. Invariably, the demands of existing politico-administrative structure of government development policies are important in determining the nature of the participation offered. This is because in most developing countries, the government is the major provider of development resources.

### **Politico-administrative Support**

In an institutionalized system, the extent of government support and commitment is an important determining factor to a project to achieve its intended goal. Nonetheless, as Paul (1983) points out, the degree of support to different programmes varies. The same author maintains that the stronger the support and political consensus behind a programme, the greater the likelihood that programme managers will work in a favourable environment. On the contrary, when top political support is feeble or nominal, programme managers find it difficult to mobilize the needed resources and achieve the intended impact.

One of the factors that affects the operation of local organizations is the political support, that is, the extent to which the government favours and assists (Esman and Uphoff, 1984). They presume that if the government opposes local organizations, their prospects of success are greatly diminished. However, there is also another way of looking at this relationship. For example, Meister (1969), quoted in Esman and Uphoff (1984), suggests that local organizations will perform best in areas which have been neglected by the government, where people will be spurred on to self-help because they have been bypassed.

Given this dilemma, it is essential to seek the perception of the forest users with regard to government support in community forest management. This is because Nepal is a developing country. Rondinelli et al. (1987) maintain that in many developing countries, local institutions often lack the



incentives, adequate funds, technical expertise and management capacity to provide services.

### **Decentralization**

Yet another road-block that limits people from participation in development programmes is concentration of power within the development agency, whereby national rules and regulations are taken from the center down to the rural hinterlands where it replaces traditional customary norms. The converse of such a situation is generally termed as decentralization.

One of the main requirements for successful participation as stipulated by the United Nations (1975) is decentralization of government institutions so as to bring public decision-making processes as close as possible to the people. Rondinelli and Nellis (1986:5) define decentralization from an administrative perspective as "the transfer of responsibility for planning, management, and the raising and allocation of resources from the central government and its agencies to field units of government agencies, subordinate units or levels of government, semi-autonomous public authorities or corporations, area-wide, regional or functional authorities, or non-governmental private or voluntary organizations".

The point of concern of this study on decentralization is the shifting of authority from a government department (Department of Forests) through the units of a government agency (District Forest Office) to the voluntary organizations (Forest User Groups) for the management of forest resources. The reason being that decentralization as a causal variable has association with participation of the people in development. A number of studies (Johnston,

1982; Finsterbusch and Wicklin, 1989; Smith, 1991) posit this fact. Following are among the relevant facts that emerged from these studies:

(1) Centralization of the responsible government agency and centralization of the project are negatively related to beneficiary participation;

(2) Decentralized and non-authoritarian type of project organizational structure are much more conducive to beneficiary participation than are centralized and authoritarian project organizations;

(3) The refusal and unwillingness on the part of the paid nutrition workers to delegate authority to the volunteers resulted in the failure of an extensive nutrition programme in Indonesia. It happened so because the officials feared that targets would not be met, or that carelessness and errors would ensue if the community assumed responsibility for the implementation of an activity;

(4) Centralization factor has affected participation in two ways. The first effect of centralization is that Health Authorities and to a lesser extent, the Local Authorities are accountable to Central Government, the dictates of the latter can affect the growth of participation as the government seemed to be in favour of participation only in the consultative sense. The second way of effect is that it has not chosen to develop participation through developing responsibilities to the wards (the lowest level within the formal political system at which political representatives are selected).

The rationale for decentralization policy in Nepal is to promote local participation in the planning and implementation of development tasks and to



mobilize local resources for development. However, it is also apparent that decentralization in Nepal is not free from the above mentioned syndromes. Observing the less satisfactory results of the decentralization programme, Aryal (1988) argues that the present decentralization programme is not complete but only a partial decentralization. Likewise, in their study of several integrated rural development programmes, Bienen et al. (1990) state that decentralization in Nepal suffers from important drawbacks. Local capabilities severely limit the scope and size of projects that can currently be managed by local institutions. In addition, decentralization's significant role for political institutions increases the politicization of projects and makes it difficult to reach the poorest strata.

More specifically, at the heart of community forestry is the devolution of authority and responsibility for the forests and their management to the forest users (Gilmour, 1991). Fisher (1990) comments that although community forestry is, by definition, concerned with decentralization, efforts to implement community forestry policies are frequently the responsibility of centralized bureaucracies. That is why he questions: 'how does a highly centralized bureaucracy implement a decentralized programme'? Fisher cites an example of Nepal's community forestry programme in which despite far-sighted legislation, the programme's achievement has fallen short of some of the more optimistic expectations. Hence, he argues that there are some institutional problems that has limited the success of the community forestry programme in Nepal. This problem is what he called as 'institutional incompatibility' between the 'customs' of the forest administrators and the 'customs' of rural people. According to him, the major area of conflict include: (1) the tendency

of bureaucrats to assume that there is a vacuum of knowledge and institutional capacity in rural communities, (2) overemphasis on committees as a form of organization, and (3) overemphasis on *panchayats* in organizing community forestry. Therefore, Chhetri and Pandey (1992) question whether the Decentralization Act of 1982 and its bylaws of 1984 fostered the widely talked idea of popular participation in Nepal.

The preceding discussion indicates that decentralization is deemed necessary for strengthening the capabilities of forest user groups for undertaking the responsibilities assigned to them. This taken as granted, the present study assumes that decentralization of authority is a necessary condition, though may not be sufficient, in order to achieve wider participation of members of the forest user groups in management of forests.

### **Empowerment**

It needs to be mentioned here that transfer of authority to the committees is a necessary condition, but not sufficient to ensure their participation. In this connection what becomes crucial is the control on the part of various segments of the society so that they can address their pressing needs and concerns. This points to another important factor that comes in the way of participation, that is, the extent to which the members of the community are being made capable of participating by external agencies, beside their own capabilities to do so. Apparently, it is the issue of empowerment on the part of the target beneficiaries. To Gow and Vansant (1983), the implication of effective beneficiary participation is both a genuine redistribution of power and a significant broadening of local capabilities. The emphasis is on empowering

local capabilities as the key to going beyond the rhetoric of rural development participation.

Another important aspect of empowerment has been noted by Cohen and Uphoff (1977). These authors state that one of the most crucial characteristics of qualifying the participation of persons or groups in various project activities is the degree of power they wield to make their participation effective. That is why Hunter (1976) argues that if any attempt is to be made to fit local programme to local human and technical possibilities, then power has got to be devolved, decisions have got to be made lower down, by the people who know the local situation better.

More recently, Vivian (1991) puts forth the relevance of empowerment and disempowerment of the communities of the Third World in the context of participation in resource management. She argues that without the inclusion of the concept of empowerment, an analysis positing a simple linkage between poverty and environmental degradation is incomplete, and unhelpful in policy terms, although in certain cases poverty clearly aggravates the process of degradation. Viewing from this account, she arrives at a conclusion that 'environmental degradation in rural areas of the Third World is not due to poverty of rural communities; rather, poverty is a symptom of one of the primary underlying causes of local level environmental decline in the Third World today: the disempowerment of these communities'.

Likewise, Gilmour and Fisher (1991) also indicate the importance of the concept of 'empowerment' in a situation where rural societies are not homogeneous and egalitarian. This is because wealthy and powerful people

have frequently been able to capture the benefits of development programmes in many parts of the world. According to Gilmour and Fisher, empowerment involves recognition of the various elements in a heterogeneous society and consciously focusing attention on disadvantaged sections.

Above all, in an institutionalized system, participation does not occur in a vacuum. Polity provides institutional framework and determines the nature and extent of people's participation in development. This study accords the nation-state as a political institution. Political institution, according to Johnson (1986), is the relatively permanent cultural ideas and social structures through which power is distributed and exercised in societies. In many cases of participation, what is often observed is the undermining of public participation by both administration or bureaucracy and local institutions. In their study, King et al. (1990) found a meeting of forest users dominated largely by the local politicians. This domination prevented women, poor and low caste people from articulating their opinion, thus rendering them to just agree with the decisions of the meeting.

One of the reasons that creates problems in participation is the conflict between the wider national interest and the local community interest. An examination of the institutional factors from village community's viewpoint in a given political system therefore becomes important. It is essential because the situation demands an appropriate strategy that would serve as a mechanism in countervailing the relationship between the government and the people in an effort to fulfill their respective vested interests.

## Structural Factors

Organizational structure is a means to an end. It is the means by which people and resources are focused to achieve certain objectives. Following Hall (1987), the structure of an organization is dynamic. Therefore, an organization changes in size, adopts new technologies, faces changing environment and cultures, adopts new strategies or finds old ones, and adjust to other organizations in their field.

Much has been described about the importance of a voluntary organization and the relationship of its various structural elements with performance. The studies of Esman and Uphoff (1984) pointed out the local organization as a necessary condition for accelerated rural development and that such an organization must be seen in terms of a system of institutions performing various functions in the rural sector of a particular country. Similar is the view of Oakley (1980), who maintains that an organization has always been a central feature of rural development programmes and projects. This central importance has been derived from a convincing argument that an organization is vital as a mechanism by which rural people can get involved in development activities.

In many situations a local organization is needed so that it acts as a channel through which local people can participate in the development and implementation of a programme. In a study, Korten (1983) noted the lack of an appropriate local organization within the community as one of the obstacles in an effort to generate people's participation in development programmes.



In situations where institutions are reckoned to affect the participatory process, local organizations are considered to be the most powerful and progressive forces for it. Fisher (1992) suggests that the existence of an effective local organization is essential for the success of a community forestry programme. The present study is to look at the local organization's some of the structural elements, that have relevance to the forest user groups to be studied.

### **Dimensions of Function**

As regards the number of activities a local organization undertakes, there exists two lines of opinion. Tandler (1976), quoted in Esman and Uphoff (1984), based on her study of cooperatives strongly argues in favour of single-function local organization as effective. On the other hand, Esman and Uphoff (1984) found that multi-functional local organizations were likely to build up both the resources and the commitment from members to operate effectively over time. They also mean that more functions in an organization might permit more trade-offs, or side payments; members who are not happy with one activity might receive compensatory benefits from a different activity. There are a few others who are in favor of having local organizations focused on a single-function. For example, from his study of cooperatives, Fals Borda (1976), quoted in Esman and Uphoff (1984), concluded that single-function organizations would be more stable.

From the preceding discussion, it appears that both the types of local organizations have advantages and disadvantages. Clearly, this is an indication of the necessity to examine the effectiveness of FUGs with single or multiple function from the perspective of the forest users themselves.



### **Mode of Formalness**

Following Hall (1987), formalization is not a neutral concept as it can be put in a continuum in terms of rules and procedures to be followed in an organizational context. At the high extreme of formalization, there are specific rules and procedures to be strictly followed. At the other end, there exist no such strict rules and procedures that the members are to abide by.

There is a considerable debate in the literature about the mode of formalization of an organization with respect to its effectiveness. In other words, there are two dimensions to this issue. Those who argue in favour of more formalized organizations are: Dore (1971), quoted in Esman and Uphoff (1984), and Sherraden (1991). They recognize the following propositions as positive outcomes of an organization being more formal:

(1) Informal organizations based on traditional norms and power structure, will be either unable to perform more modern development tasks or unwilling to direct efforts in ways that will help the less advantaged sector of the community; and

(2) Formal structure of community participation increases villagers' involvement in local programming - an important accomplishment in its own right, although this formal structure of participation does not permit villagers to be represented at higher levels of decision-making.

On the other hand, Hunter (1976) and Esman and Uphoff (1984) show considerable support for more informal modes of organization in matters of

involving rural people in development activities. One suggestion they provide is not to put the groups in a much more formalized situation.

In the context of forest management in Nepal, Gilmour and Fisher (1991) point to the forest management systems in terms of two broad types, that is, informal and formal. They distinguish between formal and informal in that informal management systems are simply sets of agreed rules and practices that regulate the way people use forests. On the other hand, formal management systems have organizations which help to do the same thing. They also indicate that it is quite common to find highly visible formal systems that are totally ineffective in carrying out any sort of forest management.

To manage community forests in Nepalese situation is a case of managing common property resources (Gilmour and Fisher, 1991). In this regard, Hardin (1968) argues that in the absence of sanctions, the use of community resources will inevitably lead to over-use and, therefore, degradation of resources. To abide by the rules strictly does mean moving towards maximal formalization and sanction is one of them in a more formalized forest management systems. In a sense, sanctions could be effective means of protecting Nepal's community forests as well.

The implication of mode of formalness to the present study is that whether or not a forest user group needed to be a formal organization under the present forest management policy of the government? The present study seeks to determine whether or not an FUG should be a formal organization or not, from the perception of the forest users themselves.

### **Decision-making Structure**

There are two opposing schools of thoughts regarding decision-making structure. One of these asserts that local organizations need strong executive leadership to deal decisively with their environment, while the other relies more on the maximum consensus and wide participation of individuals in decision-making. Perhaps the appropriateness of a particular type of decision-making structure depends on the purpose of the decisions being made and to be utilized.

Esman and Uphoff (1984) mention Aristotle's classification of political systems as rule by one person, by a few persons, or by the many, which means that local organizations may be governed by an executive, by a committee (or committees), or by an assembly of all the members. But they classified decision-making structure as: (1) essentially executive decision-making; (2) an executive plus committee(s); (3) decision-making by committee(s), including an executive committee; (4) committees plus an assembly or committee-of-the-whole; and (5) essentially assembly decision-making.

Although the most democratic approach in decision-making process is the one in which the whole assembly is involved, yet the success on the part of an organization in terms of decision-making structure is also an important aspect. If a decision is important for the organization, a non-participative style is likely to be appropriate to use; if the decisions are important for the subordinates in terms of their work, a more participative approach would be taken (Heller, 1973, quoted in Hall, 1987).

It appears that it is not the same decision-making structure that is effective in all the situations. From a study of rural local organizations in Botswana, Willett (1981), quoted in Esman and Uphoff (1984), concludes that given the mobile nature of the population in its pastoral and agricultural activities, it would be better to vest responsibility in one person than in a committee. But a relatively more democratic and egalitarian approach than this has been reported by Kneerim (1980), cited in Esman and Uphoff (1984). Kneerim found a combination of committees and assembly as the most often successful decision-making structure in Mraru Women's Organization in Kenya.

However, Esman and Uphoff (1984) assert that purely or primarily executive form of decision making is unsuccessful. They describe association of assembly forms of decision-making with effective performance of specific tasks, thus indicating a greater success of overall performance of local organization with the more participatory arrangements.

At the core of decision-making structure in an organizational situation of local organizations, like the forest user groups, is not the decision *per se*, but also its consequences for the organization in which it takes place. More specifically, the consequences of decision-making have bearing on the organization's effectiveness, which in turn affects the interests of its members to participate. This is because these organizations represent the interests of their members.

### Size of Organization

The number of people in a particular organization is one of the several meanings of size of organization. Though quite a great deal of literature on group research are available, yet detailed studies devoted to group size with respect to rural development participation appears to be still scanty.

Like in the case of structure of organization discussed above, there also exist two different lines of argument as regards the size of a local organization. Many authors (Hare, 1962 and Krech and Ballacy, 1962, cited in Douglas, 1976; Douglas, 1976; Hunter, 1976; Doherty and Jodha, 1979; Golladay, 1983), in Esman and Uphoff (1984), contend that local organizations need to be small in size. It may be that the smaller a local organization, the greater will be its effectiveness. The following are the points of their argument in favour of small size local organizations:

- (1) domination is less likely in small groups;
- (2) conflict is less frequent in smaller local organization;
- (3) with the increase in group size, members tend to become less satisfied, the gap between the most frequent participator and others tend to become proportionately greater and communication among members may become a problem;
- (4) a group which is too large for its purpose and organization pushes certain members out to the periphery and denies them access to the line of communication and control, thus leading to a situation favorable to the formation of dissident subgroups;



(5) group cohesiveness and member satisfaction tend to be greater in small groups; and

(6) large groups inhibit participation of some members.

On the other hand, Johnston and Clark (1982), quoted in Esman and Uphoff (1984), suggest that smaller local organizations are not necessarily better. Stogdill (1959) provides a contradictory evidence on the relation of group size. He means that the productivity of large groups exceed that of small groups on 'abstract' problems, and reverse is the case on 'concrete' problems.

The review indicates that the effectiveness of a group is often influenced by its size. The advantages and disadvantages of both small as well as large group are also clearly stated. Notwithstanding, the group size has not been described in terms of exact number of members it should be composed of in order to be effective for a particular purpose.

In the context of the community forestry programme in Nepal, the group, that is, Forest User Group is a vital local organization, through which participation of local people is to occur. King et al. (1990) present a case of forest user group composed of 544 households covering many villages and a wide range of caste groups as not possessing any sense of 'common identity' or 'community' and lacking any organizational base for acting together.

In the case of irrigation development and land shaping, Doherty and Jodha (1979) point out that a group consisting of 100 farmers is suited to long term maintenance as well as enforce the rules necessary to keep up group action on their own. Since the gross size of a group is closely related with its purpose and duration, they suggest that identification of the appropriate group



size for the result or activity desired is quite important. Following these authors, it also becomes essential to find out appropriate size an FUG should be for its effectiveness, which in turn affects the extent of people's participation in forest management programme.

### **Linkage Factors**

One of the strategies for popular participation as United Nations (1975) stipulates is that in order to ensure that the public is informed about major issues and that the government is responsive to preferences, it is necessary to create an effective communication system between the government and the people. From their experience in citizen participation in food aid in Ghana, Brathwaite and Hodge (1987) contend that community participatory programmes are usually unsuccessful because of inadequate training and insufficient information, with which to make informed decisions, received by the citizens. Of the certain prior conditions for success in citizen participation, the most important is a good communication network which alone can provide meaningful participation between the three vital constituents of the triangular partnership in administration - the political leaders, the civil servants and the general public (Bava, 1984).

It appears that as in other rural development programmes, a good communication network plays a pivotal role in community forestry programmes also. In their study of communities in Nepal, Pelinck et al. (1984) observed many people who lacked sufficient knowledge of the Government's policy and legislation on community forestry and the availability of seedlings free of charge. Arnold and Campbell (1985), with regard to community

participation in Nepal, mention the lack of widespread public knowledge of the details of managing a Panchayat Protected Forests as the greatest barrier to participation during the project's early years. More recently, Chhetri and Pandey (1992) point to a low level of communication between the DFO, rangers and the local people as one of the factors responsible for the failure of the traditional community forestry programme.

What could be felt, at this juncture, as a necessity is a mechanism that would keep all the relevant organizations properly tuned to one another in terms of interaction and exchange of information and, maintain similar mechanism between these organizations and the project personnel. Thus, the term 'linkage' comes in order to establish a communication network. Esman and Uphoff (1984) define linkage in terms of interaction and exchange of information and other resources on a regular basis, looking at the extent and effectiveness of communication and influence both downward to and upward from different levels of organizations. Vertical and horizontal linkage within and among local organization and their linkage with the government agency are three types of variables described by Esman and Uphoff.

In their study of local organizations' linkage and overall performance, Esman and Uphoff (1984) found that the great majority of local organizations that registered very poor were unlinked, whereas less than one-third of outstanding local organizations had no vertical linkage. Their proposition is that regionally or nationally federated local organizations tend to be found in the more successful categories. Also, relative success in performance can strengthen local organization's affiliation with higher-level bodies or give them reason and resources to such bodies.

It is pertinent to mention that communication in organizations go in more directions than just up and down, that is, the directions of communication within and between the organizations. This type of communication is critical for effective functioning of a social system or an organization, as Katz and Kahn (1978) point out.

Since an organization is a social entity, organizational theorists have increasingly recognized the importance of interorganizational linkage. The study carried out by Esman and Uphoff (1984) came out with the conclusion that the local organizations which were regularly horizontally linked had relatively better performance than those unlinked or occasionally linked. These authors described linkage in terms of the extent of government's control over local organizations. According to them, local organizations are better off with none at all than with too much, although some official involvement appears to be the most favourable relationship. Even considerable government linkage can be quite desirable as long as it does not become directive, that is, degrees of linkage where there is heavy interaction controlled by the government, and as long as local leaders and members do not lose control of their organization or their feeling of responsibility for it.

Most social forestry projects now assume that participation is best achieved through community organization (Fujisaka, 1983), quoted in Salazar (1990). It is, however, not an easy task to form such groups and see that the groups function harmoniously towards the attainment of a goal. As Santhanam et al. (1984) point out, there are some factors which operate in bringing the members of a group together to do a particular task. These authors underline the need to understand what makes people come together and share together in

any activity. This is because it has a bearing on understanding the process of participation where the main interest is in bringing people together for a development activity.

The Government of Nepal's forest policy, which has been developed with the help of foreign aid, is a radical one; it calls for the handover of most of the hill forests to the rural people's organizations called 'user group' (Gronow, 1990). The programme intending to encourage participation must work with the people to determine whether an organization is needed and if so, how it can be developed. It is apparent that appropriate structural elements are also important to a local organization's effectiveness. The CFDP, to be implemented through local organization in changed political culture of the present time, demands establishment of an effective organization. But the question is what type of organizations? This is because, during partyless panchayat system, the *panchayat* which was considered the appropriate local institution for the perpetuation or reconstruction of local resource management practices failed to be effective (Seddon, 1988).

### **Situational Factors**

The environment under which participation is to occur also engenders variations in the extent of participation by the intended beneficiaries. Esman and Uphoff (1984) recognize that participation variables are likely to be affected by environmental factors, and themselves to influence both structural and functional elements of local organizations. The circumstances in a particular setting often pose a constraint in the way of participation.

### **Physical Setting**

This represents the location and the topographical situation of the project site. As regards physical setting, Cohen and Uphoff (1977) note that getting regular participation in farmers' association meetings is quite a different matter in the hills of Nepal than in the flatlands of Bangladesh. During the rainy season (when there will be flooding) Bangladesh faces difficulties as severe as those year-round in Nepal. This implies that in such physical setting where the project is located, a long rainy season may make it impossible to hold regular meetings throughout the year because the roads and paths become impassable. Another important aspect is physical distance. The experience of Chhetri and Pandey (1992) in this regard, showed that the physical distance between the settlements of users and the forest to be protected and managed is an important factor that influenced the participation of individual households in the management activities.

The site for the present study, as many other parts of the country, is in the hills. It is, therefore, essential to understand how the physical environment of a particular location affects the extent of participation of the people in question in development tasks.

### **Forest Situation**

It is often believed that people would participate effectively only when their direct personal interests are at stake. One of the main reasons for people to participate in forest management activities is to fulfill their basic needs such as fuel, fodder and timber for their own use. In one of the situations, Gautam (1987) noted that people started forest management practices when the people



found their accessible forests were degraded. It seems that, as Fisher (1988) and Gilmour, quoted in Joshi (1989), point out, where products are relatively accessible, it is unlikely that people will actively participate in forest development activities and it is unlikely that they will form organizations to protect or manage forests. Therefore, Arnold and Campbell (1985) stipulate that the willingness of people to participate in community forestry management system generally depends on motivation arising from the growing shortage of their forestry needs.

It appears that communities that have shortage and serious depletion of forest products show considerable interest in community forestry activities, while those with plenty of resources have least interest or no interest. It is, therefore, implied that the extent of involvement depends upon the forest situation in terms of availability and accessibility.

### **Previous Experience with Development Interventions**

The experience people have had with government interventions or with foreign-aided programmes, whether good or bad or indifferent, will affect their willingness to participate in a new undertaking (Cohen and Uphoff, 1977). An example mentioned by them to illustrate this factor is that prior experience with a project where rice seeds failed to germinate may make it difficult to get new high yielding varieties adopted, or if a local government official absconded with the community's self-help funds. This type of incidence may lead to many people distrusting new community development efforts.

The above perception of rural people may be attributed to what Rogers (1969) described 'dependence on and hostility toward government authority' as



one of the subcultures of peasantry. Rogers cited an example of the peasants who implemented the new practice "by the numbers," without a thorough understanding of how to use it correctly, eventually leading to delayed failure brought by a potato disease that the peasant did not know how to combat. Another example he mentioned is a long history of exploitation at the hands of outsiders that had conditioned the villagers to this hostile view.

Indeed, the beneficiaries' such hostile attitude and mistrust towards the implementers have been reported in the case of forestry programmes as well. In her study on the forest policy performance in India, Khator (1989) observed that while certain wood lots are to be maintained by the people under the supervision of the forest officials, 80 percent of the people complained about the harassment by the forest officials. Thus the bureaucrats had no favourable reputation in the local community. She further mentioned the existence of long history of mistrust and hostility between the people and the bureaucrats.

In the forestry sector of Nepal, keeping in view the increased pressure on the physical environment during the last fifty years, the state has intervened more strongly against the use of forest land by local inhabitants to maintain the existing forest as a national, not a local, resource (Seddon, 1988). Government's interventions into the arenas of Nepal's forest management date from the year 1957, with the imposition of Forest Nationalization Act.

Another case is the introduction of Forest Preservation Act-1967 in order to further define forest offenses and prescribe penalties. However, the impact of enforcement of such law seemed to have favoured only a particular segment of the society, while it might have assisted the Forest Department in

its policing functions. Therefore, Mahat et al. (1986) make the point that it is only the weaker section of society which was influenced by this law enforcement. Those powerful individuals involved in offences often escaped through influence and manipulation. More recently, Chhetri and Pandey (1992) have come to argue that the intervention by the government of Nepal and other agencies have been less successful in the task of protection, management and sustainable use of the nation's forest resources.

Government's intervention into the arenas of forest management in Nepal have been explained in a variety of ways. There have been some degree of mistrust and suspicions between the local inhabitants and the government. At this juncture, it is reasonable to mention the worthiness of the explicit intervention by the government into the current community forestry programme as well. On the one hand, the efforts by the government might have been praiseworthy, but the way interventions are made as well as the way it is perceived by people also need thorough understanding in order to prevent further intensification of the hostility and mistrust. If intervention is to be made, the effort should be such that it leads to production of significant desirable impacts.

### **Satisfaction**

In a strict sense, the value of participation is the degree of satisfaction that a person derives from the development programme. Satisfaction is part and parcel of the major activities. When people perform their roles, they expect that they will derive some sort of satisfaction. One of the dimensions of organizational performance identified by Kast and Rosenzweig (1979:21) is

participant's satisfaction, which is a basic ingredient of organizational performance. According to these authors, in an effective organization people have to be satisfied with their membership.

The preceding discussion lead us to a relationship between performance and satisfaction. In this regard, Lawler (1967), cited in Petrock and Gamboa (1976), maintain that performance causes satisfaction because performance leads to rewards, which in turn lead to satisfaction. This satisfaction, in fact, in turn acts as a motivating force for the people to drive themselves towards more effective participation.

Somewhat related to the phenomenon of satisfaction is the motivation and value expectancy. As Klandermans (1984) stresses the need for motivation on the part of the individuals to participate, and contends that rational individuals will not participate in the production of a collective good unless selective incentives motivate them to do so. He bases this motivation on the value-expectancy theory. Expectancy theory indicates that the willingness to perform is influenced by the level of reward expected and satisfaction achieved.

The foregoing theories and views expressed by various authors seem to have, to a considerable extent, relevance to people's participation in the community forest management. It is obvious that the local residents expect a share which in turn might fulfill their needs as a result of participation in the programme activities. In this regard, the views of Arnold (1983) and Karmacharya (1987) appear to be quite relevant. They assert that in order to get people's involvement and participation in community forestry, there is a need to provide benefits to the local people from the very beginning.

However, getting benefits of any sort from a development programme is not the end of it, as the ultimate essence of participation in development is to be evaluated by the degree of satisfaction it generates among the people. This is because, as Chaturvedi and Mitra (1982) state, a development plan which fails to generate satisfaction is futile. Gasson (1977) also asserts that satisfaction with cooperatives is strongly related to participation. From this standpoint, it becomes imperative to examine the level of satisfaction of the people with the development.

The source of satisfaction with development in its entirety lies not merely in the actual fact of receiving some material benefits, but also important is the goal attainment. The review of literature by Douglas (1976) suggests that it is not goal attainment *per se* which leads to satisfaction but rather perception by members of the group's progress towards its goal.

### **Conceptual Framework**

This study acknowledges the human factor as a decisive entity in relation to management of community forests. It views forest management from the social perspective. The term 'social' according to Conyers (1982), in a more general sense, is of concern or involvement with people. Explicitly, the study is about the human component in forest management. Within this human component, participation aspect is its main thrust. In a strict sense, the proposed study focuses its concern on the sociology of participation in forest management, and provides analysis of participatory behaviour of the forest users with regard to community forest management.

In developing a conceptual framework of participation in community organization, Wandersman (1981) emphasizes that an organizing framework should specify the important dimensions such as *who* are participating, *how* people are participating and *what* are the effects of participation. Cohen and Uphoff (1980) have devised a more appropriate framework for describing and analyzing development participation. This framework delineates three dimensions of participation in order to answer the questions: *what* kind of participation takes place; 'who' participates in them; and 'how' the process of participation takes place? Chambers (1985) also provides a basis for analysis of the dimensions of participation, one based on the experience of rural development in Eastern Africa, in three ways. According to this author, 'who' participates may be the government staff, local inhabitants or a combination of both, and 'what' means the type of institutions through which participation occurs, as well as the objectives and functions.

In a similar vein, several other authors and agencies (ECLA, 1973; Colleta, 1979; Oakly, 1980; de Kadt, 1982, FAO; 1987) have also emphasized these dimensions of participation. Moreover, in the context of community forest management, even the international experience has also indicated the 'participation aspects of the project: who, how, when and why' as one of the implications for social forestry research support which deserve special emphasis (Wiersum, 1990).

The dimensions of participation described above and the factors that are likely to influence the level of participation form the basic framework (Figure 1) of the present study. This study intends to analyze participation in terms of



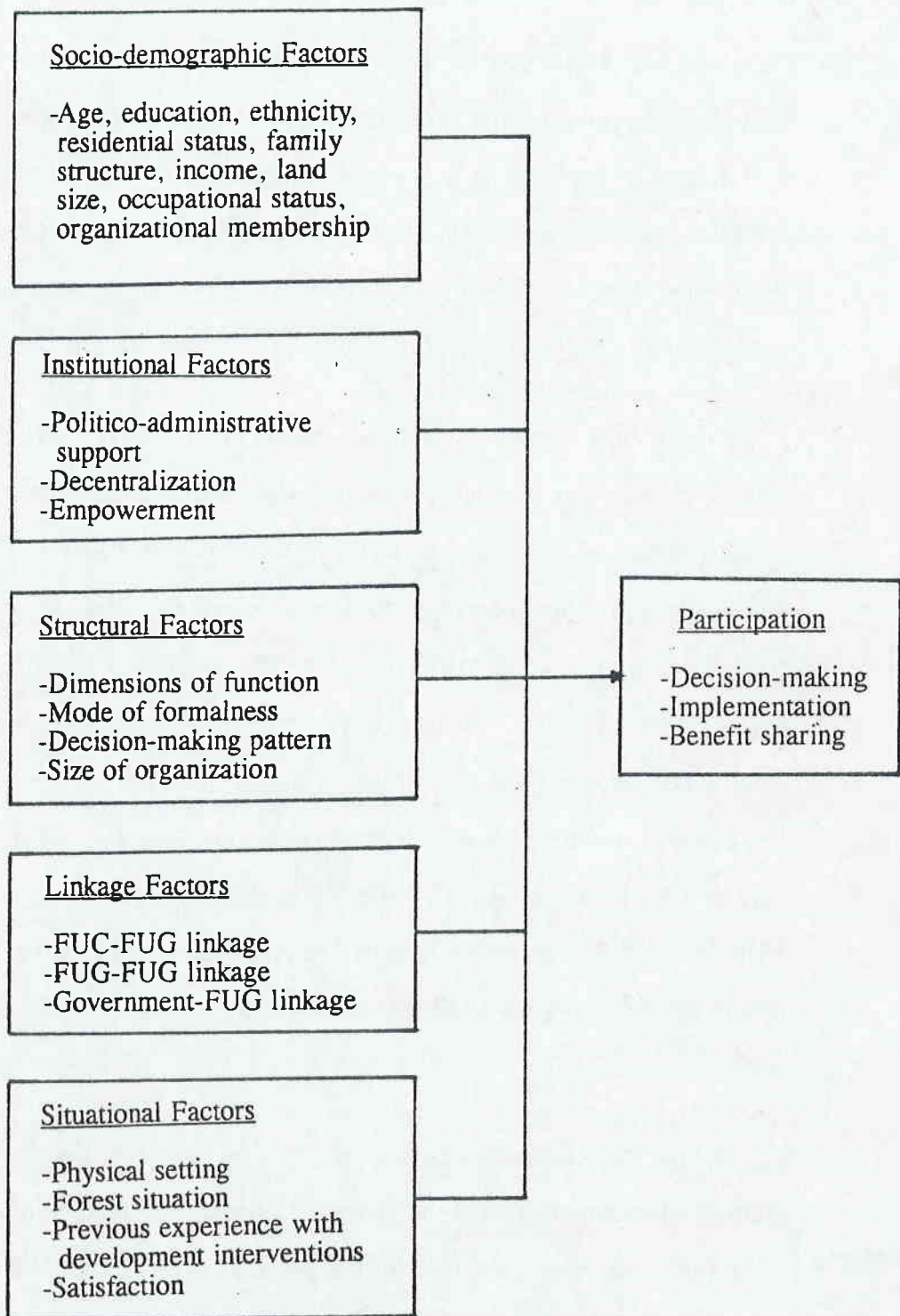


Figure 1: A Diagram of Conceptual Framework to Show Relationship between Different Factors and Level of Participation



'who' (among heterogeneous mass of rural inhabitants) participate; 'in what' activities (decision-making, implementation and benefit sharing); 'how' (type and channel of participation); 'to what effect' (the level of participation); and 'why' (factors affecting extent of participation). The following section provides the logical base for the understanding of the conceptual framework of participation in the present study.

The review of relevant literature indicate that the participation as a social process cannot take place in a vacuum. The socio-economic framework has a major bearing on its nature, extent and effectiveness (Blair and Olpadwala, 1988). So, there should be some context in which participation is to occur. As rural people do not necessarily constitute a homogeneous category in terms of socio-cultural, economic status and personal characteristics, the view varies even within communities depending on the position of the person within the local power structure. It also depends very much on such characteristics as age, gender, caste, income and social position (Gilmour et al., 1989). This study is based on the premise that the level of participation is best understood in accordance with a particular context and the personal characteristics of the participants concerned.

Since participation of people is to occur through local organizations known as forest user groups, the group effectiveness in relation to participation is crucial, assuming that certain factors are likely to be associated with effectiveness. Therefore, the present study also attempts to understand the group dynamics of the forest user group. Moreover, Santhanam et al. (1984) state that the back-bone of participation lies in group dynamics and the behaviour of the individual in a group situation.

This study emerges out of a concern in involvement of people in managing forests in a government sponsored forest development programme in Nepal. Against this backdrop, it adopts the version of Cernea (1989:1) who states "for government projects attempting to financially induced development, the key difficulty soon becomes a social and institutional one: how to generate and sustain the involvement of social actors, the people who are to give life to the project". Viewed from this perspective, the nature of participation is essentially a political act that is likely to be influenced by the bureaucracy. Bureaucracy, according to Jary and Jary (1991) is a type of organization in which administration is based upon impersonal, written rules, and a hierarchy of offices. It is in this context that the present study assumes the existing politico-administrative system as well as structural aspects of the forest user group in relation to participation as of fundamental importance. In a country like Nepal which has pinned its faith in forest development through people's participation, major societal change calls for reaching institutional and structural attitudes through the constitutional process. This implies introduction of structural and behavioral changes in the administrative system responsible for planning development plans and framing policies.

For the purpose of the study, five major clusters of variables are taken into consideration. The variables selected are broadly categorized as: (1) socio-demographic (2) institutional (3) structural (4) linkage, and (5) situational, all of which constitute the independent variables. The selection criteria and analysis of the above-mentioned variables are based on: (1) previous works at conceptual as well as empirical levels, (2) the nature of the problem to be investigated (3) the situation of the study area and (4) expected

outcome of the study. The dependent variable is the participation in CFDP, often referred to as participation. The activities of participation include decision-making, implementation and benefit sharing. This study has been designed to examine the extent of participation in these activities and explain the possible reasons for the variation in the level of participation.

Socio-demographic factors refer to the personal attributes of the individual participating members of the forest user groups. These variables include age, educational level, gender, ethnicity, occupational status, land size, marital status, residential status, income, family type, family size, and organizational membership.

Institutional factors refer to bureaucratic policy with regard to the extending of government's administrative assistance and support to user groups, and the degree of decentralization within the prevailing political system and empowerment at individual level.

Structural factors refer to organizational elements that facilitate to put the members of a particular social organization in an attainment of a specific goal. The variables under the structural factor are dimensions of function, mode of formalness, decision-making pattern and size of organization.

Linkage factors imply those variables which aid in maintaining continued relationship, through the process of interaction and exchange of information, among the members of an organization, between or among such organizations and other external organizations. The variables associated to the linkage factor include FUC-FUG linkage, FUG-FUG linkage and government-FUG linkage.

Situational factors mean an aggregate of several types of situations in which participation is to occur. The physical setting of the locality where the project is going on, forest situation, satisfaction derived by the people from participation and the historical accounts that local people experienced with the development interventions are the variables included under this factor.



## **CHAPTER III**

### **METHODOLOGY**

This chapter describes the selection of the study area and the methodological steps employed to carry out the present study. The methodological aspects include: selection of research site, sampling procedure, instrument development, testing of reliability of the scales developed, research approach and data collection methods, operationalization of variables, data analytical procedure and use of statistical tools for the analysis of data.

#### **Selection of the Research Site**

The research site encompasses three Village Development Committees (VDCs), namely, Murali Bhanjyang, Naubise, and Nilkantha in Dhading District (Figure 2 and 3). Following are the criteria for selection of the VDCs, as locale of the study.

1. The existence of Community Forest Development Programme;
2. The district chosen represented a typical hill region in Nepal in terms of forest situation and socioeconomic background of the rural hill population;
3. The sites chosen had the local people involved, through Forest User Groups, in the management activities of community forests; and
4. The inhabitants of the site were receptive to the research and researcher.



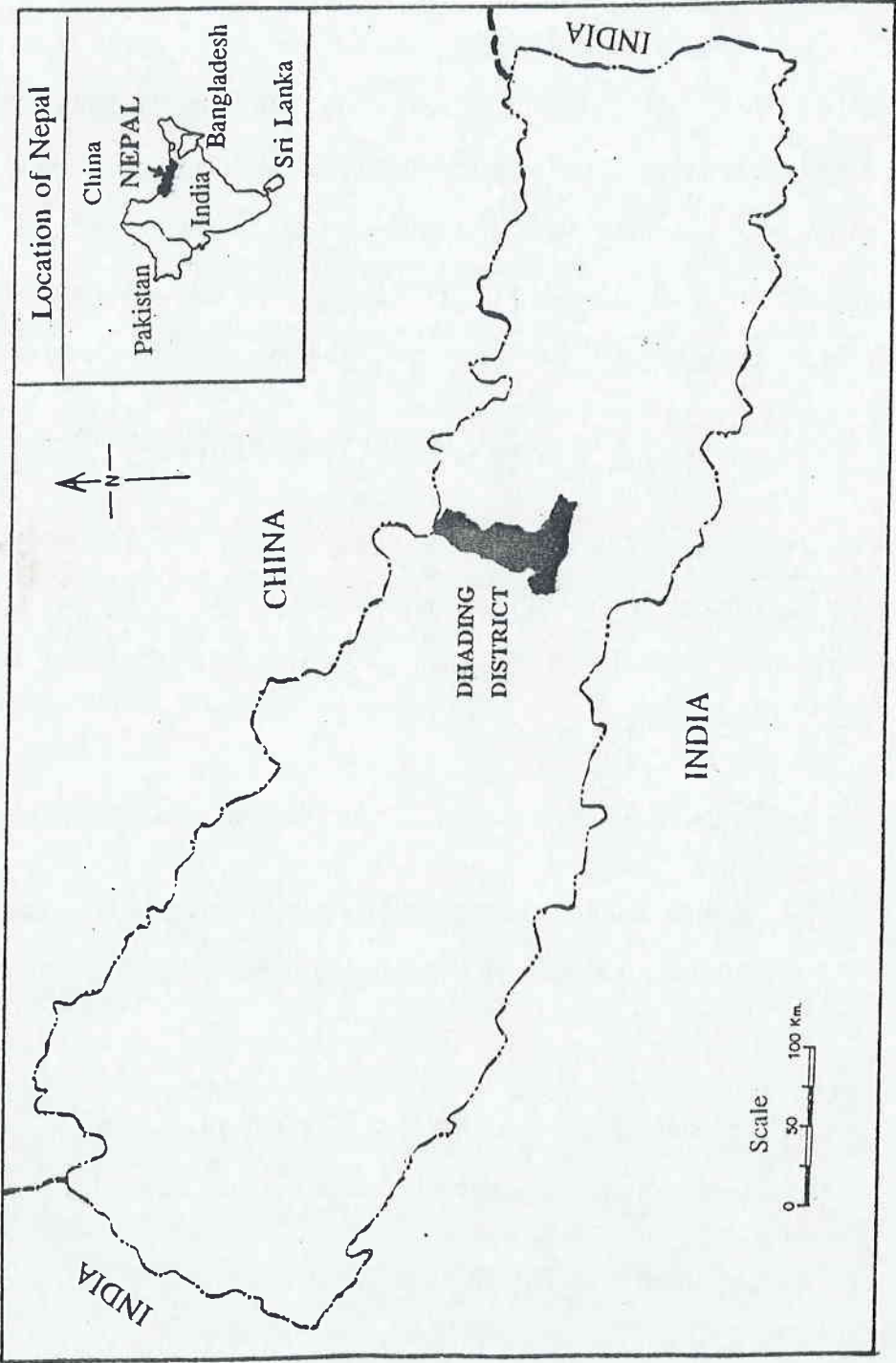


Figure 2: Map of Nepal Showing Study Area



Figure 3: Map of Dhading District Showing Village Development Committees (Shaded Portion) Selected for the Study

### Sampling Procedure

With the advent of the community forestry programme in Nepal in the 1970s, the concept of user group, better known as the Forest User Group (FUG) was introduced. Community forest is one category, aside from national and other categories of forests. Each one of the community forest has its particular name, after which the FUGs have been named. The Community Forest Development Programme (CFDP) renders the FUGs responsible for the management of community forests, to which they are affiliated.

A multi-stage sampling method was adopted for selecting the subjects for the study. This meant that the sample was selected in stages; where the sampling units in each stage were sub-sampled from the larger units chosen at the previous stage. Appropriate methods were used in the selection of the units, until the ultimate sampling units were reached. Here the ultimate units, on which analysis was carried out, were members of Forest User Groups. The rationales behind the use of this sampling method are as follows:

1. Since the research site covers a relatively wide area with its target elements scattered over a wide area of rugged nature of topography, it was not feasible to prepare a complete sampling frame. Multi-stage sampling is the most appropriate method in such situations.

2. Even in situations where sampling frames for the ultimate units are available for the universe, a multi-stage sampling plan can be more convenient compared to a single-stage sample of the ultimate units. This is because the cost involved in surveying and supervising such a sample on a large-scale can be very high due to logistic problems including travel, identification, and

contact. This question of resource constraints, therefore, was another consideration for adopting this sampling method; and

3. This sampling technique can reduce response errors and improve sampling efficiency by reducing the intra-class correlation coefficient observed in natural sampling units, such as households or villages.

The above reasons for adopting the multi-stage sampling are in line with the rationales stated by Som (1973). The stages involved in selection of VDCs, FUGs and respondents to be studied are described below.

#### **Stage One: Selection of VDCs**

Because of resource constraints and difficult terrain in the research area, three VDCs were purposively selected, out of a total of 50 in the entire district. These VDCs were selected after visiting several potential research sites in the district, and in consultation with the personnel involved in community forestry programmes in Nepal and the rural dwellers themselves. The decision to select these VDCs was mediated mainly by the general criteria set for the selection of the locale of the study. Besides, for selecting the VDCs, such factors as the proximity to the district headquarters and highway, relatively more remote place and inclusion of multi-ethnic groups were also taken into consideration with a view to have a representative sample respondents from a heterogeneous rural populace. The consideration of these factors was also guided by the discussions held with the forestry personnel at the District Forest Office in Dhading. In this way, the researcher was able to select the VDCs which more or less represented the district.

### **Stage Two: Selection of FUGs**

At the time of the survey, there were a total of 190 Forest User Groups already registered with the District Forest Office (DFO) from all the 50 VDCs of Dhading District. There also existed many other FUGs that were yet to be registered with the DFO. The representative household members to FUGs all over the district formed the population of the study. A list of FUGs was prepared for each selected VDC with the help of records provided by the DFO and by making pre-research visits to respective VDCs.

From the above selected VDCs of Murali Bhanjyang, Naubise and Nilkantha, 10 FUGs were purposively selected; three from Murali Bhanjyang, four from Naubise and three from Nilkantha. In addition to the general criteria followed for the selection of VDCs, these 10 FUGs were selected based on the following reasons: (1) to ensure the desired proportion of respondents in the sample for the study, (2) to have all the categories of FUGs, namely registered with DFO with community forests handed over to them, just registered with DFO but forest land not handed over yet and FUGs not registered yet with DFO, and (3) to include multi-ethnic groups.

### **Stage Three: Selection of Respondents**

After selecting the FUGs, the list of households of each FUG was obtained from the chairperson or the executive members of the respective Forest User Committees. In all, there were a total of 570 households under the FUGs selected for the study. All the households belonging to the selected FUGs thus served as the sampling frame. The sample size was limited to 200 only (Table 1), keeping in view the internal validity problem often caused due

**Table 1**  
**Distribution of Sample Respondents by VDC and FUG**

Village Development Committee	Forest User Group	Sampling fraction	Sample Size
1. Murali Bhanjyang	Amarabati (55)	0.35	19
	Sasah-Danda Ra Mewabari (117)	0.35	41
	Kalika (30)	0.35	11
2. Naubise	Barhabise Khaba (26)	0.35	09
	Chisapani (23)	0.35	08
	Sungure (68)	0.35	24
	Toplang (49)	0.35	17
3. Nilkantha	Okhlepakha (86)	0.35	30
	Tar Danda (30)	0.35	11
	Hatti Dhunga (86)	0.35	30
Total	570	0.35	200

Note: Figures in the parentheses indicate the total number of members of the FUG.



mainly to history and maturation effect on the study. In terms of proportion, 200 is 35 percent of 570, and this 35 percent was used as the sampling fraction applied to all FUGs for selecting the sample. From the households so selected, an adult member, who represented his or her household to participate in CFDP activities, was chosen for the purpose of the interview. So the household representatives to FUGs served as the unit of enquiry as well as analysis for the purpose of the study.

Sample selection was done by adopting simple random sampling technique, because of numerous merits of this particular method. This was done with the help of a table of random numbers. The total number of members in the selected FUGs ranged from a minimum of 23 to a maximum of 117. In each FUG, every member household was assigned a distinct identification number. For example, 01 to 23 and 001 to 117 in the case Chisapani and Sasah-Danda Ra Mewabari respectively. After that, numbers from a table of random number were read in side way order (instead of up or down). This consistency was maintained throughout the sampling process. Each time, an assigned number that appeared in the table was included in the sample. Any number that came up for a second time was rejected. For each FUG, this procedure was continued until the required sample size (35 percent) was obtained. For instance, in the case of Amarabati FUG, all those numbers were not included after the sample size reached 19, that is, 35 percent of its total.

### **Instrument and Pre-testing**

The instrument used for gathering the information from the respondents was the interview schedule consisting of both close-ended as well as open-ended questions. The instrument was developed at the Universiti Pertanian Malaysia in consultation with the members of the researcher's thesis supervisory committee. The graduate students from Nepal, studying at the Universiti Pertanian Malaysia, were also of help at the preliminary stage of the interview schedule development.

In the field situation, it was found more convenient for the interviewer to ask and the interviewee to answer the questions in their native language. The interview schedule was, therefore, translated into Nepali language for the purpose of the interview. The suggestions and comments received from the social scientists and relevant personnel involved in community forestry projects in Nepal were also incorporated in the interview schedule.

The purpose of pretesting was to find out whether there were any ambiguities, complications, or inadequacies in the interview schedule. It also served to check whether the instrument to be used for data collection needed any modifications so as to make it more valid as well as a reliable one. Leary (1991:48) in this context states "Questionnaires are often pre-tested by asking a few people to complete the questionnaire as they tell the researcher what they think each question is asking, report on difficulties they have in understanding the questions or using the response formats, and express their reactions to the items".

The interview schedule was first pre-tested on randomly selected 20 village people at Sankosh VDC, which is also situated in the study district. However, the physical distance between the 'actual study sites' and 'pre-testing site' as well as time spacing was well maintained in order to avoid contamination from the former to the latter. The rationale for pre-testing the interview schedule in the same district was to ascertain a situation similar to that of the actual study area. The individuals, on which the questionnaire was pretested, were also members of the FUGs in their VDC, but were not included in the final sample of the present study.

### **Reliability Test of the Scales**

The instruments developed to measure a particular variable or a set of variables must be reliable. Reliability is a matter of whether particular technique, applied repeatedly to the same object, would yield the same result each time (Babbie, 1992: 129). According to Leary (1991), reliability refers to the consistency or dependability of a measuring technique. An instrument is reliable to the extent that the scores made by the respondents remain approximately the same in repeated measurement (Ary et al., 1990).

For the purpose of the present study, four different scales, namely, participation in decision-making, empowerment, decentralization and previous experience with development interventions, were developed as there existed no ready-made instrument to measure these variables. Except for the participation in decision-making, the scales to measure the above three variables were developed by following the Likert scaling. Respondents were asked to mark, on a four-point rating scale, their degree of agreement-disagreement to each

expressed statement. Each respondent would then be assigned an overall score representing the summation of the scores he or she received for responses to the individual items.

The Likert method is based on the assumption that an overall score based on responses to the many items reflecting a particular variable to be measured provides a reasonably good measures of that variable (Babbie, 1992).

In general, when Likert-type scale is used, the responses from the respondents are derived based on a five-point scoring pattern. However, in the present study, the result of pre-test of the questionnaire showed that the respondents did not find any hesitation or perplexity to respond to the statements in the scale in terms of certain degrees of 'agree' or 'disagree' rather than being neutral. Hence, the middle response 'undecided' was conveniently omitted from the scoring system. Moreover, Uphoff (1988) maintains that the four-step scale requires more discriminating judgements than with just two or three alternatives and that having five intervals could bias choices towards the middle one which is an easy compromise. With four intervals, assessments tend toward judging performance as either satisfactory or not.

The reliability of the scales for participation in decision-making, empowerment, decentralization and previous experience with development interventions was determined by using the Cronbach's Alpha reliability test. It is based on correlations of items on a single scale. It is also a measure based on the internal consistency of the items. This measure ranges from a maximum value of 1 to 0. An alpha value of less than 0.25 shows very little

consistency for a single item to vary in the same way as the total set of questions of which the item is a part. For the scale to be used, there should be at least five questions in the set to make this measure meaningful, while an alpha value of 0.8 would show a relatively high consistency or internal agreement between an item and the set (Guy et al., 1987). The reliability coefficients of the scales developed and employed in this study are presented in Table 2.

**Table 2**  
**Reliability Coefficient of the Scales**

=====	=====	=====
Scales	Number of Items	Reliability Coefficient
Participation	9	.875
Empowerment	8	.797
Decentralization	8	.833
Experience with government intervention	6	.801
=====	=====	=====

**The Interview Schedule**

The interview schedule to be employed was finalized after eliminating the ambiguous and confusing questions. Similarly, the measurement scales in the interview schedule were included only after testing their reliability and obtaining acceptable reliability coefficients. The final interview schedule contained both open-ended as well as close-ended questions in order to elicit the relevant information pertaining to the objectives of the study.

The interview schedule employed to gather the data encompassed all the objectives of the study. The interview schedule consisted of questions: (1) to obtain information on socio-demographic characteristics of the respondents, (2) regarding forest utilization and management practices (3) to assess the extent of participation in decision-making, implementation and benefit sharing activities of CFDP, (4) on the factors related to the participation such as institutional, structural, linkage and situational factors, and (5) related to extension and training (see Appendix).

### **Research Approach and Data Collection**

Both quantitative as well as qualitative research approach have been used in the present study. As every technique of data collection has some limitations associated with it, the present study utilized a multi-method approach of data collection in order to achieve the research objectives. The logic behind doing so was that the weakness of one method could be compensated by using the strength of the other. This study was based on the primary as well as the secondary sources of information. However, a major source of information was the responses of the respondents and this was supplemented by information compiled from secondary sources.

### **Sources of Data and Techniques of Data Gathering**

#### **Sources of Primary Data**

In addition to the sample respondents, all categories of village people described in this section formed the source for the primary data.



## **Data Gathering Techniques**

The field study was carried out from February through May, 1993. The following are the methods employed to collect primary data in this study:

**Survey Method:** In order to gather the relevant information, the pre-tested interview schedule (see Appendix) was administered to the respondents by adopting the personal interview technique. For the purpose of the interview, an exhaustive list of the randomly selected sample respondents was prepared. The interview was carried out by two enumerators (both of them were graduates of the Institute of Agriculture and Animal Science, Tribhuvan University, Nepal) and the researcher himself. In cases where a particular respondent to be interviewed could not be met because of one reason or other, a person from the household next to him or her, in the same FUG, was interviewed.

The enumerators employed had undergone two training sessions before they went to the field for actual data collection. The activities in the first session included acquaintance of the enumerators with the purpose of the study as well as the interview with the respondents. In the second training session, mock interviews between the researcher and the enumerators were conducted assuming the roles of an interviewer and a respondent. Similar kind of interviews were also conducted with the non-sample respondents. This practice provided an opportunity for the interviewers to develop interview techniques as well as confidence in them. Throughout the data collection period, the enumerators were kept under the close and constant supervision of the researcher in order to ensure consistency in the information gathering.

**Informal Interview:** The informal interview was carried out by asking people whosoever came across, whenever and wherever felt convenient to the interviewer and interviewee. Those being interviewed included: old and young, men and women, people from high or low economic class and castes, school teachers, village leaders, elders and elites.

The interviews were held during the entire period of the field study. This helped in establishing and building rapport between the researcher and the villagers. The issues dealt with during the interview were mainly on community forest management in general and people's participation in particular. One of the advantages of this kind of interview with the villagers was that both parties felt comfortable to talk freely even about sensitive issues. This is because the people being interviewed would not be aware that as if it was an interview in that the interviewer would actually be recording the information provided to him.

**Direct Observation:** During the study period in the villages, the researcher kept witnessing events such as people holding meetings and discussing the issues relating to forest management as they went on. The researcher also had opportunities to attend three meetings of the Forest User Groups in different villages, while in the field. Observation was also made on the forest management operations, like nursery development, demarcation of the forest land, new plantations, and protection, being carried out by the community in their respective forests. It was also common sight for the researcher to note people carrying back-loads of bundles of fuelwood and tree fodder. In some of the cases, the villagers were requested to give information on the history of forest management practices which they had been following.

They were also thrown into discussion on the matters that were observed, such as firewood cutting, lopping of tree leaves and grazing.

With the witnessing of events that were happening in a natural setting, recording of the information on the events also went on simultaneously. Depending upon the circumstances, materials such as field note-book, tape recorder and camera were used to record the information. But in cases where instantaneous recording of the events was not possible because of one reason or other, recording of information on the observed events was done soon afterward, while the memories of the events were still fresh in mind.

From the observation, the ideas about plausible problems and their solutions, the way rural people conduct the meetings, how different kinds of people interact, way of motivating people and the extent of people's involvement in various activities were gained. In this way some information that were virtually not possible to get by other methods of data collection were obtained by this method.

**Group Discussion:** The more ideal places for group discussion were village tea-shops, *chautara* (resting place under a tree) and porch of the people's own houses. Having a discussion with several people at a time had the advantage that people corrected one another when they did not agree with what was being said. The issues for discussion were mainly the management of community forests with the involvement of members of the FUGs. The discussion held indicated the clues to how different people perceived the same matter in their own ways. It also helped cross-check the information and get additional information.

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### **Sources of Secondary Data**

Secondary information were obtained from various government and non-government organizations, through review of the official records, documents and relevant publications. The organizations consulted were the District Forest Office in Dhading, respective Forest Users Committees and Village Development Committees concerned and District Agricultural Development Office in Dhading. The other organizations consulted were the Community Forest Development Division, German Technical Cooperation (GTZ), Nepal Resource Management Project, ICIMOD and Department of Forests, all at Kathmandu.

### **Operationalization of Variables**

This section contains the operational definitions of the variables selected, and the construction and measurement of these variables.

#### **Dependent Variable**

The dependent variable for the study is 'participation' which has been operationalized as the actual involvement of the respondents in various stages of programme activities such as (1) decision-making, (2) implementation, and (3) benefit sharing.

It has been emphasized in various literature on participation regarding the importance of involvement of people in four stages of development projects, that is, planning or decision-making, implementation, benefit sharing and evaluation. However, the literature search failed to come across any studies



that mentioned about the mechanism through which the target beneficiaries could be involved in the evaluation stage of a rural development project. That is why Feuerstein (1988) has rightly pointed out " people's participation has been strongly advocated for some time in the planning, implementation and monitoring of a wide ranges of development activities. Unfortunately, when it came to 'evaluation' the voices of the advocates of participation faltered."

With regard to evaluation, the present study also could not follow its design as was planned it *a priori*. In other words, the inclusion of the 'evaluation' aspect had to be dropped from the study design. It was done so not because of the problem encountered in constructing a standard yardstick to measure it, but mainly because the respondents were not found to be actually involved in monitoring and evaluation of CFDP activities. Moreover, it has been mentioned that because there is little written or actually accomplished on participation in evaluation, it is difficult to conceptualize how this kind of participation might best be analyzed and measured (Cohen and Uphoff, 1977).

Various approaches were used to measure the extent of participation of members of Forest User Group (FUG) in different stages of Community Forest Development Programme (CFDP). However, to be explicit, the participation of members of FUG in each of the stage of the programme was measured in terms of a low, medium and high level. The description of each of them are as follows:

1. **Participation in Decision-making:** It refers to the involvement of members of FUG in the meetings where they discuss, make plans and take decisions regarding CFDP activities. The level of participation was measured by the

frequency with which the members of FUG actually involved themselves in each of the items under decision-making (see Appendix) in the meetings of FUG, during the years preceding the survey. Nine major items, which constituted the scale for measurement of participation, were selected under decision-making activity. Respondents were asked to respond to each statement pertaining to the level of participation, in terms of a four-point scale that ranged from 'never' to 'always'. In order to be more certain of the standardization in the respondents' perception, they were initially briefed about the precise meaning of the terms in the scale. For instance, 'always' means all the times, 'most of the times' means more than half, 'sometimes' means not more than half, and 'never' means no participation. For the response 'always', a score of 3 was assigned, a score of 2 for 'most of the times', a score of 1 for 'sometimes' and a score of 0 for 'never'. This scoring pattern is based on the scoring system followed by Uphoff (1988) to describe the situation in a farmers' organization with regard to irrigation water management. The total score a respondent could obtain varied from a minimum of 0 to a maximum of 27. All item scores were summed across for each respondent. A higher total score meant a higher level of participation. However, the variation in the level of participation as high, medium and low was determined on the basis of rule for normal distribution.

**2. Participation in Implementation:** Implementation refers to the carrying out of afforestation programme with the involvement of the members of FUG. At this stage of the CFDP, the local people were found to be involved by making two types of resource contribution. Therefore, participation in implementation was operationalized to mean the involvement of members of FUG in

afforestation programme in terms of resource contribution, that is, labour as well as material.

**(a) Labour Contribution:** The activities, to which physical labour was contributed by the members of FUG, have been classified into three categories: (1) pre-planting, (2) planting, and (3) post-planting stages of the afforestation programmes. The pre-planting activity included layout, demarcation and fencing of the forests, transportation of seedlings and manure, and nursery management. Digging of pits and tree planting were the activities included under the plantation programme. The activities such as protection of forest from fire and grazing of animals, forest watching, intercultural operations, and irrigating trees were included under the post-planting activities. These three broad categories of activities in fact formed the indices for measuring the extent of participation.

In order to measure their level of participation, the respondents were asked to indicate whether or not they had contributed any labour to three activities under afforestation programme undertaken by their FUGs. The responses were derived in terms of 'yes' or 'no'. A score of 1 was given for 'yes' and a score of 0 for 'no' responses. The score a respondent could secure under this section ranged from 0 to a maximum of 3.

**(b) Material Contribution:** Materials that were contributed to afforestation programme included the implements, tools and materials for transportation (for example, bamboo baskets and jute sacks). The respondents' extent of material contribution (either on permanent or temporary basis) to the CFDP was determined by questioning them whether or not they had provided

any of the above mentioned items. The responses were received in the form of yes or no. A score of 1 was given for the response 'yes' and a score of 0 for 'no' responses. Since there were three items, the score a respondent could obtain ranged from 0 to 3.

The extent of participation in implementation was determined on the basis of the total score obtained by the respondents by adding the score of 'labour contribution' and 'material contribution'. The higher score indicates a greater extent of participation.

**3. Participation in Benefit Sharing:** It refers to the rewards accrued to the members of FUG from their participation in CFDP. The possible rewards included both material benefits such as forest products (fuelwood and fodder) and non-material benefits such as: gaining respects from the members of the community; acquiring knowledge and skill required for tree growing; learning the value of forest conservation in maintaining ecological harmony; and getting the privilege of participating in organized trainings and tours on forest management and rural development.

Participation in benefit sharing was measured by developing an index, which consisted of six items. The respondents were asked to identify the kinds of intrinsic/non-material as well as extrinsic/material rewards gained by them from their participation. The responses were derived in terms of 'yes' or 'no'. A score of 1 was given for each 'yes' response and a score of 0 for 'no' response. Scores obtained by each respondent were then summed up to give a total score. The total score that could be obtained by a respondent ranged from

a minimum of 0 to a maximum of 6. This total score was used as a measure of the extent of participation in the benefit sharing.

### **Independent Variables**

The independent variables selected for the study are divided into five categories, that is, (1) socio-demographic, (2) institutional, (3) structural, (4) linkage and (5) situational. The procedure employed in the measurement of these variables is as follows:

#### **A. Socio-demographic Factors**

1. **Age:** Age is operationalized to mean the number of full years completed by the respondents at the time of interview. It was measured by direct questioning in terms of the number of full years they had lived.

2. **Gender:** Gender refers to the distinction of respondents as male or female. Feminist writers have now come to distinguish between 'gender' and 'sex'. The term gender encompasses socially constituted relationship between men and women, rather than derived from biological sexes (see Mackintosh, 1981). In the version of Whitehead (1979) 'sex is the province of biology, while gender is the province of social science'. Therefore, in the present study, by gender, it is concerned not with the women *per se*, but the role and relationships that exists between male and female household members in relation to forest management.

3. **Ethnicity:** A mutually accepted definition of the concept of ethnicity is almost impossible due to its various connotations. Pyakuryal (1986) defined ethnicity as varying degrees of reciprocal, common identification (or



'peoplehood') marked by symbols of shared heritage, an awareness of similar historical experience, and a sense of in-group loyalty or 'we-feeling' associated with a shared social position, common ancestry, designated by those outside the group, similar values and interests and often, but not inevitably, identification with specific national origins. An ethnic group is a social category of people sharing an identity of their own culture, customs, norms, beliefs and traditions. Zanden (1990), termed those groups as ethnic groups, that are identified mainly on cultural grounds such as language, folk practices, dress, gestures, mannerisms, or religion.

In the present study, the respondents' ethnic groups were determined based on their family names rather than their religion and language. This is because the nomenclature system in Nepal is such that the last name that is, family name of a person denotes the caste or ethnicity to which he or she belongs.

**4. Residential Status:** It refers to the status of a respondent, in terms of whether he or she was an original resident of the said community or a migrant. The residential status was determined on the basis of the birth place of respondents. Those respondents who were born and lived in the same village were treated as original residents. Those who were born elsewhere but have later settled in the village, where they were currently residing, were labelled as migrants.

For the purpose of the study, length of residence which refers to the time period which a respondent has spent his/her life in a particular community, was taken into consideration in order to examine its relationship with



participation. The length of residence was measured in terms of the number of full years the respondents have lived in the community where they were at the time of the interview.

**5. Marital Status:** It refers to whether or not a respondent was married. On the basis of their marital status the respondents were classified into two groups, that is, married, and unmarried. Only those respondents who were legally living with their spouses were considered as married and those who were yet to be married were treated as unmarried. The sample selected for this study did not include other categories such as widow or widower, divorced and separated.

**6. Family Type:** The type of family has been operationalized to mean whether a family is of nuclear, joint or extended in nature. A nuclear family comprises merely of husband and wife (or either one of spouses) and their dependent child(ren). Joint family consists of two or more brothers' families living together forming a single household. The extended family refers to a group of people, related by kinship, where more than two generations of relatives live together forming a single household.

**7. Family Size:** It refers to the total number of members in a respondent's family. For measuring this variable, the total members in the family was taken as the parameter. That is, the number of family members corresponded to the total score assigned to each family of the respondent.

**8. Educational Level :** It refers to the literacy status of the respondents. The respondents were classified into two broad categories as literate and illiterate. The respondents who had ability to read and write were considered

as literate and those who lacked these abilities were treated as illiterate. A score of 2 and 1 were assigned to the respondents in order to label them as literate and illiterate respectively. Within this broad categories, in order to measure the literacy status of respondents on a ratio scale, a different scoring pattern was followed. According to this, a score of 0 was assigned to those, who were devoid of formal education, though some of them might have developed an ability to read and write by virtue of non-formal education programme being attended by them. For the respondents who had received formal education, the number of years of schooling was treated as corresponding score assigned to them. However, in order to classify the respondents into different categories, the classification made by the Population Census of 1991 (CBS, 1992) has been followed. According to this classification, 'no schooling', 'primary', and 'secondary' indicate respectively '0', '1-5', and '6-10' years of schooling.

**9. Occupational Status:** It is the status of a respondent in terms of his or her creative or economic life to which he or she has devoted the best part of his/her time. The respondents were classified into various occupational groups on the basis of primary professions held by them. For the purpose of examining the relationship of this variable with participation, a score of 1 was given to those respondents who were having just one occupation (primary) and a score of 2 to those with two occupations (primary as well as secondary).

**10. Income:** Income refers to the total amount of cash (in Nepali Rupees) earned by the family of a respondent from various sources in one year. The total amount earned was recorded in terms of gross annual income, that is, without deducting the family expenses.

11. **Land Size:** It refers to the total cultivable area owned by the family of a respondent. For the purpose of the study, only those lands which were legally owned and actually cultivated by the respondents were taken into account. The land size was recorded in hectares. Land tenure status implies whether or not the respondents owned any land within their jurisdiction on.

12. **Organizational Membership:** It refers to any membership the respondents had in formal organizations either in the past or present condition. The level of membership in organizations was measured by a simple indication of whether or not the respondent belonged to any organization, other than FUG either as a general member or an office bearer.

Gasson (1977) mentions that membership has been treated in some studies as a continuous variable, to cover past membership as well as present or even the strength of attitude towards future membership. But Gasson (1977) himself and Hougland et al. (1979), in their study, considered membership as a dichotomous variable (member or non-member). In the present study, this trait of the respondents was treated as continuous variable. This is because the degree of membership was measured on the basis of the total score a respondent could obtain as being member of organizations other than FUG. A respondent receiving a score of 1 or 2 indicated that he or she was just a 'general member' or an 'office bearer' respectively in each organization. Scores obtained by each respondent were added to give a total score, which was used to measure the level of membership in social organizations.

## **B. Institutional Factors**

Institutional factors refer to the government's policy action with regard to administrative support and services to FUGs and distribution of power among the local communities. Additionally, it is also concerned with the government's centralization or decentralization policy action regarding the transfer of authority and responsibility to the FUG in connection with community forest management.

Explicitly, institutional factors have been divided into three sub-factors, namely, politico-administrative support, decentralization and empowerment.

1. **Politico-administrative Support:** It refers to the supportive or opposite role of the Department of Forest, as perceived by the members of FUG, in terms of delivering necessary administrative and legal services and resource commitment to the FUG in the implementation of community forestry programme.

The extent of support was measured based on the scores obtained by each respondent from answering to the question posed to them. The responses were obtained in terms of 'active support' and 'support' and 'inadequate support'.

2. **Decentralization:** Decentralization is conceived as the extent of shift of authority and responsibility from the concerning bureaucratic agency to the FUG, as perceived by the respondents for the management of community forests. It must be mentioned here that the centralization or decentralization was viewed at the organizational level, that is, transfer of authority and responsibility between the DFO and FUG.

The respondents' feeling about the significance of a decentralized or centralized administrative approach was ascertained by employing a Likert-type of format. The scale consisted of a total of eight items, of which four are favourable and the remaining four are unfavourable ones (see Appendix). A statement indicating the significance of decentralization is favourable one and the converse form of it denotes an unfavourable statement. The items generated under this scale were based mainly on the literature on decentralization in rural development in general and social forestry in particular.

The instrument so developed required that the respondents should express their degree of agreement or disagreement with each statement pertaining to decentralization or centralization in terms of a four-point format represented by the labels: strongly agree, agree, disagree and strongly disagree. The responses were recorded in terms of numerical values of 4, 3, 2 and 1 to indicate 'strongly agree', 'agree', 'disagree' and 'strongly disagree' respectively. For the unfavourable statements the scoring pattern was just reversed. The scores of all items were summed up across for each respondent. In this scale, the possible overall scores ranged from eight to 32. But the actual score obtained by respondents ranged from 17 to 32, with the mean score of 25.75. A higher total score indicated the need for bureaucratic agency to adopt more liberal administrative policy towards the FUG, in order to implement a people-centered forestry programme more effectively.

**3. Empowerment:** In the context of rural development participation, empowerment means the extent of redistribution of power in favour of individual members of each segment of society so as to make them capable of



participating in developmental activities. In the present study, empowerment has been conceived as the strength of power that individual members of FUG wield, as perceived by the respondents, so as to feel themselves capable of participating in CFDP activities more effectively. It is pertinent here to mention that the empowerment on the part of the members of FUG was seen at the individual level, rather than at organizational level.

The degree of empowerment was measured by developing a Likert-type scale that consisted of four positive and four negative statements (see Appendix). A favourable statement is one which speaks itself of the significance of empowering of all the categories of members of a social system. A statement that is converse of the empowerment is an unfavourable one.

The measurement procedure followed for this variable was same as for measuring 'decentralization'. The possible score for this variable was between eight and 32. However, the actual score ranged from 23 to 32, with the mean of 27.5 for all respondents. A higher total score indicated the need of higher degree of redistribution of power on the part of the local people to make them more capable of participating effectively.

### **C. Structural Factors**

Structural factors refer to organizational elements of FUG and the functional relationship among these elements towards achievement of an organizational goal. The factors included under this variable were selected mainly based on the literature on structural factors in local organizations (see



Katz and Kahn, 1978; Esman and Uphoff, 1984; Hall, 1987). The structural factors are operationalized as follows.

**1. Dimensions of Function:** It refers to the number of project level activities concurrently undertaken by a particular local organization. The dimension of function was determined by a simple indication of whether or not an FUG had been undertaking any project other than community forestry simultaneously. This was ascertained by asking the members of FUC. The responses were recorded in terms of 'yes' or 'no' for an FUG being multi-functional or mono-functional respectively. The study also intended to ascertain a particular dimension of function in preference to either one of the two types. For this the respondents were asked to indicate their opinion in favour of a particular dimension of function which they perceived would be more effective.

**2. Mode of Formalness:** Mode of formalness refers to the status of an FUG in terms of formal or informal. A formal FUG is one which is characterized by possession of its defined purpose, members with specific roles, rules and regulations, and maintenance of records of decisions and meetings conducted. The opposite of it are the characteristics of an informal FUG.

Since all the FUGs under the study had, to a greater extent, the above mentioned characteristics, all of them were treated as either more formal or less formal ones. For the purpose of the present study, an FUG which has already been registered with the DFO is considered a more formal one, and the one which is yet to be registered as a less formal.

**3. Decision-making Pattern:** It refers to the decision-making process followed by FUGs. This is indicated by a series of decision-making structures ranging from an authoritative through democratic structures.

Within an FUG, there is an FUC which is comprised of a few office bearers, who are either elected or selected by the FUG members who form the general body. In this study, the respondents' views regarding their preferred pattern of decision-making in their FUGs were sought. For this, the respondents were asked to mention the decision-making body they preferred most out of the three possible decision-making patterns: (1) executive, that is, by any one of the office bearer or an influential person in the FUG; or (2) committee, that is, by members of FUC; or (3) assembly, that is, by majority of the members of FUG.

**4. Size of Organization:** According to Miller (1991), a measure of size might be the number of personnel, the amount of assets, and the degree of expenditures. The same author states that in organizational research, size is generally expressed as the number of employees, even if it is not necessarily the best way to measure the scale of operation. In the present study, the size of organization was conceived as the total number of individuals who are members in an FUG by the groups' criteria of membership. The exact number of members in a particular group was considered as the respondents' response in relation to size of FUG, to which he or she belonged. The number of members in each FUG was taken into account so as to indicate the group size as well as to measure whether or not the group size had any relationship with their participation.

#### **D. Linkage Factors**

Linkage, in this study, has been conceived as the transactional relationship, in terms of the extent of interaction or information exchange, between the major actors involved in CFDP. The potential actors in the interaction process are the government personnel, as well as members of FUCs and FUGs. Considering the likely interaction between these actors, three major types of linkages, based on the literature on communication in organizations (see Katz and Kahn, 1878; Esman and Uphoff, 1984; Hall, 1991) have been included. These are:

- 1. FUC-FUG Linkage:** It refers to the pattern of interaction and exchange of information between the FUC members and FUG members in connection with community forestry programme.
- 2. FUG-FUG Linkage:** It is conceived as the pattern of interaction among the members of the FUG, and/or between the members of more than one FUG regarding the matters related to community forestry.
- 3. Government-FUG Linkage:** It refers to the pattern of interaction between the members of FUG and any of the staff of the District Forest Office (DFO) to discuss the matters pertinent to community forestry.

In all the three linkage variables, the frequency of respondents' contact, as perceived by them, with the other persons (FUG members or DFO personnel) was referred to as patterns of interaction. The respondents' strength of linkage was ascertained on the basis of how often a respondent interacted with other persons.

The respondents were asked to identify their perceived level of interaction as 'frequently' 'sporadically' and 'never', to which a score of 2, 1 and 0 were respectively assigned. In the case of FUG-FUG and FUC-FUG linkage, no respondent fell under the category 'never'. The respondents' frequent and sporadic interaction were labelled as 'strong' and 'weak' linkages respectively.

However, the strength of government-FUG linkage was measured by developing a composite index (see Appendix) that covered the respondents' pattern of interaction with the District Forest Officer/Assistant Forest Officer, Rangers/Assistant Rangers and Forest Guards/Nursery men working under the DFO. The 'strong' and 'weak' linkage were determined on the basis of the total score a respondent could obtain. The possible overall scores ranged from 0 to 6. But the actual scores ranged from 2 to 6 for all respondents, with the mean score of 3.61. Respondents obtaining scores equal to or more than the mean score were labeled as having strong linkage, while those with less than mean score as having weak linkage.

## **E. Situational Factors**

1. **Physical Setting:** Physical setting refers to the location and other geographical situations in which the project exists. The terrain, road network and other natural features were the aspects taken into consideration under physical setting. The study was to seek the influence of physical setting on the participation of local residents. This was done by directly asking the respondents whether the condition of the physical setting in the project site was favourable or unfavourable for their participation, as they realized, in CFDP

activities. The responses on the extent of favourable or unfavourable physical setting in the project site, as experienced by respondents, were recorded on a three-point continuum ranging from a situation of highly favourable to unfavourable. Respective scores were assigned for each response.

**2. Forest Situation:** Forest situation refers to the status of the forest resources in terms of depletion and degradation due to human encroachment or improvement brought about by conservation and plantation activities.

The respondents were asked to state the existing condition of the forests compared to the previous 8 to 10 years. The responses, which were mainly based on respondents' observation and perception about the forest condition in their locality, were derived as: 'getting worse' to indicate declining trend, 'no change' to indicate as it was before, 'worse to better' to indicate earlier declined - but now improving, 'getting better' to indicate continuously improving over time.

**3. Experience with Development Interventions:** It refers to the optimistic or pessimistic feeling of members of FUG, as perceived by the respondents in view of the reflection of the past development policies and/or projects, about the on-going development intervention. The views of respondents are based mainly on their experience with the past development policies and projects on community development.

This variable was measured by constructing a Likert-type scale (see Appendix). The scale contained a total of six statements, that is, three favourable and three unfavourable. A favourable statement is one which reflects the sense of optimism and a statement reflecting pessimism is an



unfavourable one. The items were mainly regarding the respondents' favourable or unfavourable opinion about the likely outcomes of the development interventions. The respondents were asked to indicate their level of agreement with the statements pertaining to the development intervention, in terms of a four-point scale as defined by the labels: 'strongly agree', 'agree', 'disagree' and 'strongly disagree'. Each statement was scored from 1 to 4. A score of 4 was given for response 'strongly agree', a score of 3 for 'agree', a score of 2 for 'disagree' and a score of 1 for 'strongly disagree'.

The possible score ranged from six to 24. For all respondents the range of scores was found to be between 14 and 24, with the mean score 18.63. The higher total score secured by a respondent indicated a higher level of optimism he or she had about the existing development programme.

**4. Satisfaction:** It refers to the FUG members' feeling determined by the difference between what have actually been perceived by them as achievements and what was their expectation of achievements, from involving themselves in various activities of CFDP. A particular development programme might generate satisfaction or dissatisfaction among people, in a variety of ways. From this standpoint, it becomes imperative to examine the level of satisfaction of the people involved in CFDP.

It has been stated that satisfaction being a subjective state of the individual, it presents problem in its measurement (Petrock and Gamboa, 1976; Chaturvedi and Mitra 1982). In their study on citizen participation in rural development, Chaturvedi and Mitra (1982) measured the respondents'



satisfaction at three levels, that is, adequately satisfied, somewhat satisfied, not at all.

It is pertinent to mention here that development satisfaction is not coterminous with benefits received. In other words, a person receiving relatively much more benefits may not have derived full satisfaction from a development project because of several other reasons and vice-versa.

The CFDP has been implemented with definite objectives. At the same time, the participating local people also do have some ambitions and aspirations. If these are met, people may demonstrate some sort of feeling of satisfaction in themselves. Embodying this assumption, the respondents were asked to identify their perceived level of satisfaction with the overall performance as well as the progress of the CFDP.

### Analysis of Data

The data collected using close-ended questions assigning numerical scores were edited before they were transferred to the computer for analysis in order to ensure accuracy. Anecdotal accounts were considered to describe the aspects such as forest management systems, forest situation, and handing over procedure of community forests. Similarly, the descriptive statistics such as frequencies, percentages, measures of central tendency and standard deviation were employed in presenting and summarizing the data. Cross-tabulations were carried out to set up frequency distribution of one variable against another.

A variety of statistical analyses were carried out in order to determine the relationship between participation and selected variables depending upon

the scales in which these variables were measured. The Chi-square test was computed to examine whether there existed any association of such independent variables as respondents' ethnicity, literacy status, residential status, family structure, occupational status, mode of formalization, FUC-FUG linkage and FUG-FUG linkage, and satisfaction with the level of participation. The Chi-square test was computed for statistical significance because these variables are nominal or ordinal in measurement. This statistical tool is to test whether categories of dependent variables are related to, or affected by different levels of the independent variables. The purpose is not to measure the strength of relationship between the variables, but rather to see whether there exists any significant relationship.

Likewise, analysis of variance was utilized in cases where the respondents were divided into three categories in order to determine the significance of the difference among the groups with respect to participation. Analysis of variance is especially appropriate when the dependent variable is an interval measure and the predicting variables are nominal (Hedderston, 1987: 119), and so is the case in the present study in relation to the variables: awareness and physical setting.

The Pearson product-moment correlation coefficient was worked out to determine the relationship between participation and other variables, namely, age, length of residence, family size, years of schooling, annual gross family income, land holding, organizational membership, empowerment, decentralization, government-FUG linkage, FUG size, fuelwood supply, fodder supply and experience with development intervention which were measured either in interval scale or the data were continuous in nature.

The Pearson product-moment correlation also determines the magnitude and direction of the relationship between the dependent variable and independent variables. The statistical interpretation of the relationship between dependent variable and independent variable is that: a positive direction in the correlation indicates that there is an increase in the dependent variable with the increase in the independent variable, and a vice versa. A negative direction implies that as a particular independent variable decreases, the dependent variable also decreases. The magnitude of the relationships are indicated through numerical terms ranging from -1.0 through 0 through +1.0. The interpretation of the magnitude of relationships was based on the description provided by Guilford (1956), cited in Williams (1968), and they are as follows:

- If  $r$  is  $< 0.20$  = the variables have slight; almost negligible relationship
- 0.20 to 0.40 = low correlation; definite but small relationship
- 0.41 to 0.70 = moderate correlation; substantial relationship
- 0.71 to 0.90 = high correlation; marked relationship
- $> 0.90$  = very high correlation; very dependable relationship.

Finally, multiple regression analysis was computed in order to find out the overall influence of the selected independent variables on the level of participation in decision- making, implementation and benefit sharing. The result of this analysis was used to determine the significance of each independent variable in contributing towards the dependent variable. Multiple regression, which employs more than one predictor, is used more often in the

social sciences, because combining two or more variables often lead to more accurate predictions of a dependent variable (Grimm, 1993).

The most commonly used levels of significance in the field of education are the .05 and the .01 levels (Ary, et al., 1990). In the present study, the 0.05 level of significance has been used to explain whether a particular analysis is statistically significant.

The statistical analysis of the entire data pertaining to this study was carried out at the Computer Center of the Universiti Pertanian Malaysia using the Statistical Package for the Social Sciences (SPSS PC+ 4.0) computer software.



## **CHAPTER IV**

### **PROFILE OF THE STUDY AREA, FOREST USER GROUPS AND RESPONDENTS**

This chapter contains three sections. The first section seeks to present a descriptive account of the district, which provides the locale of the study. The second and third sections respectively contain the description of the Village Development Committees (VDCs) and the Forest User Groups selected for this study. The demographic and socio-economic attributes of the respondents are presented in the last section. It must be mentioned here that the profile of the district, VDCs together with Forest User Groups and respondents were studied with the view that it would facilitate a better understanding of the problem under study, besides providing a background for the ensuing chapters. The profile of VDCs and Forest User Groups have been described mainly by availing the secondary data, while for the characteristics of respondents primary data have been utilized.

#### **Profile of the District**

##### **Location and Physical Features**

Dhading District lies between 27°40'- 28°14' latitude and 84° - 85°1' longitude. It is located in the Bagmati zone of the Central Development Region. It contains 50 Village Development Committees covering a total geographical area of 1,92,487 hectares. The district is bordered by districts of Rasuwa in the north-east, Nuwakot in the east and Kathmandu in the southeast,



Makwanpur in the south, Chitwan in the southwest, and Gorkha in the west. To the north lies the Tibet Region of the People's Republic of China.

The lowest elevation in Dhading District is found in the southwest (300m), whereas the highest is in the north (over 7,000m). Within this range, the highest point the researcher reached was about 2200 m of 'Toplang Community Forest' situated in Naubise Village Development Committee. The district is drained by three main river systems, namely, *Ankhu Khola*, *Buri Gandaki* and *Trishuli*. Within the district, while some areas are in a fairly good ecological balance, others are in a deteriorating condition. The steep lands which characterize most parts of the district, together with a growing pressure of population on the vegetation cover of the soil are the major reasons for the accelerating disturbance of the ecological equilibrium. Of the total area, 46 percent is covered with agricultural land, 48 percent with forest, and the remaining 6 percent of the land falls under 'other categories' of land (river beds, rocks, roads, settlements and snow cover) use. The district has valleys, flat terraces (*tars*) and high mountains.

Because of the wide range of altitude, there is a great diversity in climatic condition throughout the district, varying from sub-tropical in the southern parts to the temperate and alpine in the north. The district receives, on an average, an annual precipitation of 2,210 mm, 80 percent of which is concentrated in the monsoon season extending from mid-June to September. The mean temperature varies between 21°C in summer and 6° C in winter.

## Infrastructure

In terms of physical infrastructure, Dhading is one of the least developed districts in Nepal. As far as its road network is concerned, only the southern part of the district is served by an all-weather road connecting Kathmandu to Pokhara. There is a fair-weather 20 km long road connecting the district headquarters (Dhading Besi) by ferry to Malekhu Bazar across the *Trishuli* river on the Kathmandu-Pokhara highway. Apart from these major arteries, most parts of the district, especially in the north of *Trishuli* river, road connections do not exist, thus rendering travel in the district tedious. The absence of feeder roads, inadequate number of suspension bridges and scattered markets and service institutions have been physical bottlenecks hindering both the exchange of goods and services in the district, as well as social contact and interaction. As regards physical movement in the district, some parts can be reached by vehicle within two hours drive from the capital city, Kathmandu, while other areas are not motorable and hence require 4-5 days hike.

## Development Support Institutions

In the headquarters, there exist several government line agencies acting as the support systems for development activities in the district. These line agencies are the District Administrative Office, District Development Office, District Forest Office, District Irrigation Office, District Agricultural Office, District Livestock Office, Land Revenue Office, District Court, District Education Office, Women Development Office and Cottage and Rural Industries Development Office. Besides, the district is served by other support

institutions such as banks, cooperatives, veterinary hospital and its centres, hospital and health posts, postal services, Agricultural Input Corporation and a telecommunication office connecting global telephonic network. The District Forest Office, under the aegis of the Department of Forests, is responsible for the administrative arrangements and implementation of the Community Forest Development Programme in the district.

### **Population and Socio-economic Setting**

Dhading District has a total human population of approximately 305,887 with 156,564 (51.18 percent) male and 149,334 (48.82 percent) female. Of the total 49,438 households, the percentage of households owning upto one hectare, more than one hectare and landless are 74.17, 23.29 and 2.54 respectively (HMGN/GTZ, 1994).

The population in the district is composed of several caste and ethnic groups. The Caucasoid represent the castes, while the Mongoloids include ethnic groups. Mongoloid groups are mostly settled in higher elevations of the north and Mahabharat range, accounts for nearly 49 percent of the total population. They include the following groups: Tamang (21.5 percent), Gurung (7.6 percent), Newar (9.3 percent), Magar (8.3 percent), and Chepang (2.3 percent). The Caucasoid group, generally inhabiting the mid-hills, comprises about 43 percent. This group consists of Brahmin (18.7 percent), Chhetri (14.9 percent) and occupational castes such as Kami, Damai, Kumal, Sarki (9 percent). The remaining eight percent belong to other ethnic groups. The census data of Nepal recognizes a total of 25 main ethnic groups and 35 caste groups (Gurung, 1993).

Economically, the Brahmin/Chhetri and the Newars are more well off than the other ethnic groups. They own most of the fertile valley lands and are in control of major commercial activities. The rest of the other groups are left with marginal, less productive steep slopes and the hill tops.

The entire population of the district lives in rural areas. Agriculture, on which 99 percent of the total population depends, is the most important means of livelihood. Apart from this, seasonal migration and cottage industries provide significant income in some areas. Traditionally, settlements are found on hill-tops (above 1,000 metres from M.S.L.) due to the past prevalence of malaria in low lying areas. However, newer settlements have been established along the Kathmandu-Pokhara road, which follows the *Trishuli* river. Houses in a settlement are generally very widely scattered, thus making the provision of basic services very difficult.

The major crops grown in the district include paddy, wheat, maize, millets, sugarcane, oilseed and potatoes. In addition, vegetables and fruits are grown in the kitchen garden and on a commercial scale in some areas. The annual cropping pattern followed in the irrigated lowlands is early paddy - late paddy - wheat, or maize - paddy - wheat. In upland area, where there exist no assured irrigation facilities, the cropping intensity is very low. In such areas, sometimes, not more than one crop is possible in a year, and the generally grown crop is maize. The farming systems that prevail is more of subsistence in nature. The per capita land under food-crops and the per capita irrigated land stand at 0.01 ha and 0.04 ha respectively.

Livestock is an integral part of the farming systems, as it plays an important role in the local economy by providing draught power, variety of food, skin and also manure. The commonly domesticated farm animals include oxen, cows, buffaloes, sheep and goats. Most of the animals are of indigenous breed. Despite its important role in the local economy the per capita livestock holding in the district is just one and the number of farm animals per family stands at seven.

There are a number of cottage industries practiced in various parts of the district, depending upon the demand for products and availability of the raw material and skill. The industries include cloth weaving, knitting, basket-making, pottery, mat-making, vegetable drying, rope-making, hosiery and glee processing. However, these activities are generally carried out on small scale, so as to meet only the demand for home consumption, rather than for the market. Some special market-oriented industries like candle making, soap making, making of tools, utensils and furniture, rice and oil milling, tailoring, brick making, and medicine preparation from herbs also exist.

The literacy rate in Dhading District is 32.7 percent, as against the national average of 40.1 percent. There are 27 secondary schools and 370 primary schools. An institution for attaining higher education is yet to be established. Hence, people wishing to pursue higher level of studies at colleges and universities have to go out of the district.

### **Forests and Forest Management**

Forest constitutes an integral part of rural life. People are heavily dependent on forests for fuelwood for cooking, wood for agricultural tools and



plows, cremating, fodder for animal bedding, and for grazing, timber for construction, besides for some local commercial enterprises such as furniture, brick kilns, restaurants and confectioneries.

The forest vegetation in Dhading District ranges, according to the different altitudes, from the subtropical to temperate alpine types. The tree species found between 610 and 1370 meters of the lower sub-tropical region are Chilaune (*Schima wallichii*) Sal (*Shorea robusta*) Musure Katus (*Castanopsis tribuloides*) and Dhale Katus (*Castanopsis indica*). Species found in lower temperate zone are *Quercus lanuginosa*, *Rhododendron arboreum*, *Engelhardtia spicata* and *Terminalia* species. Similarly, other temperate tree species include *Betula alnoides*, *Alnus nepalensis*, *Fraxinus floribunda*, *Prunus* Sp., *Quercus incana* and *Q. semicarpifolia*.

Forest is also a major source of cash income for many people. People make bamboo products such as basket, mat which are of some exchange value. These products are either sold or exchanged for other commodities.

Over the years there has been a range of systems, or arrangements, which have been applied to both the formal and informal use in common property forests by village people in the hills of Nepal. As elsewhere in the country, the protection and management systems of forests have existed in Dhading for generations among the people of Dhading. In the past, forest protection and conservation activities were managed by *talukdari* system. It is a traditional system of forest management through local officials, called *talukdars* which prevailed before 1950. In this system, certain number of villages were defined under a village headman, a *Talukdar* or a *Mukhiya*.



People from only the pre-defined areas were entitled to use a particular patch of forest, thus people from other areas were forbidden to use it. Forest products then were available in abundance. Those who had use-right and access were free to collect forest products such as fuelwood, fodder and leaves. However, for cutting trees for construction, even those who had the right of access needed to seek prior permission from the headman.

It also appeared that there existed no any community controlled formal organization meant for the protection and management in a responsible manner. After the forests were brought under the control of the government, people began to experience a scarcity of forest products because of wanton felling of trees. The people in the study area also acknowledged the degradation of forests due to increasing demand for tree products by a rapidly growing population.

Before the advent of new legislation (Forest Act - 1993), handing over of community forests (PF and PPF) required the prior sanction of the Regional Director; beginning the procedure at panchayat level through the District Forest Controller (Kayastha and Karmacharya, 1987). However, with this procedure, the process of handing over was not only slow but also not to the extent it was targeted to do so (Fisher et al., 1989; Sharma, 1992). In this regard, the requirements of formation of community forestry committees and getting management plans approved before forests are handed over has been referred to as bureaucratic constraint by Wallace (1988). He asserts, for slow handing over, that communities have been not customarily used to formal committees created by or for government agencies, or written plans conforming to technical guidelines to manage local resources.

In the modern management of forests, Dhading District has been a part of the national forestry programme implemented in the country. Presently, the district has been divided into three ranges, namely, Dhading, Gajuri and Todke, from the forest management administrative point of view. The forestry developmental activities that include plantation establishment and demarcation of forests started in the early 1970s. The Community Forestry Development Programme has been in operation since 1980. The District Forest Office (DFO) has administered the entire district since September, 1983 (Paudyal, 1991).

Under the current forest protection and management policy of the Government of Nepal, the DFO may handover any part of a national forest to users' group in the form of a community forest in the prescribed manner entitling it to develop, conserve, use and manage such forest, and sell and distribute the forest products by independently fixing their prices, in accordance with the terms and conditions stated in an operational plan. While so handing over a community forest, the DFO shall issue a certificate thereof (HNGN, 1993).

During the field work for this study, the process of forming Forest User Groups all over the district as well as their registration with the DFO were still going on. At the same time, handing over of the forest land to the communities for management by the DFO was also going on. As of April 1993, a total of 190 Forest User Groups from 50 VDCs had been registered with the District Forest Office in Dhading (DFO/ Dhading, 1993).

## The Village Development Committees

As has been mentioned earlier, there are 50 Village Development Committees (VDCs) spread over Dhading District. Here follows the brief description of characteristics of the three VDCs selected for the purpose of the study.

### **Murali Bhanjyang VDC**

Murali Bhanjyang VDC occupies an approximate geographical area of 1,033 hectares. The land utilization pattern indicates that 65 percent is agricultural land. Forests vegetation covers 18.7 percent, and 6.2 percent is allocated to pasture land. The remaining 10.1 percent comes under the other categories of land.

This VDC is inhabited by 1,095 households with a total population of 6344. As regards land holding ownership, the households possessing a maximum of one hectare form the majority (81.6 percent). The households owning more than one hectare accounts for 18.2 percent, while the remaining 0.2 percent households falls under the category of 'landless'. The population is composed of multi-ethnic groups. Among these, Brahmin-Chhetri ranks first in numerical strength and households. Newar, Gurung, Magar and Tamang are the other important ethnic groups in descending order in terms of number.

For the purpose of the study, the Forest Users Groups affiliated with forests, namely, *Amarabati Ban*, *Sasah Danda Ra Mewa Bari Ban* and *Kalika Ban* of *Murali Bhanjyang* VDC have been included from this VDC.

## Naubise

Naubise VDC has about 3,780 hectares land, of which 38.5 percent is under cultivation. Forest and pasture land cover 31.9 percent and 4.8 percent respectively. The other categories of land account for 17.9 percent.

There is a total of 2,151 households and 14,743 population in this VDC. The majority (78.2 percent) of the households possess not more than one hectare of land. Only about one-fifth (19.1 percent) of the total households own more than one hectare. The remaining 2.7 percent households do not possess any land. Like Murali Bhanjyang VDC, the population in this VDC is also composed of multi-ethnic groups. Tamang is the dominant group in terms of their numerical strength. The second prominent group is that of the Brahmin-Chhetri, and Newar and Rai come next to it.

The forest user groups included from this VDC for the purpose of the study are affiliated to the forests, namely, *Barhabise Khaba Ban*, *Chisa Pani Ban*, *Sungure Ko Ban*, and *Toplang Samudayik Ban*.

## Nilkantha

It is in *Nilkantha* VDC where the district headquarters is situated. This VDC is spread over an area of about 1,387 hectares. Out of this, the share of cultivated land accounts for 71.4 percent. The area under forest is 12.3 percent. Pasture land covers 6.9 percent, while the remaining 3.3 percent is occupied by other categories of land.

The number of households residing in this VDC comes to 1,660, with a total population of 9,461 people. As regard land-ownership, the majority

(77.6 percent) of households are those owning at the most one hectare. A slightly more than one-fifth (21.4 percent) households possess more than one hectare, while about one percent of households are without any land. The ethnic composition shows that Newar is the most prominent ethnic group of this VDC. Gurung stands next, followed by Brahmin-Chhetri and Magar.

The user groups of the forests, namely *Okhlepakha Paleko Ban*, *Tar Danda Paleko Ban*, and *Hatti Dhunga Paleko Ban* have been chosen from this VDC for the purpose of the study.

### Forest User Groups

The Forest User Group is a bounded group with specific membership. In Dhading District, the members of forest user groups are the households who have since long been managing and utilizing the forests accessible to them. Hence, the membership in the user group is mainly on the basis of residential proximity and historical affiliation to a particular forest. Members of FUG argued that non-members are not supposed to use forests, because the latter do not contribute towards the protection and conservation of the forest. Non-members are mainly the *bazaria* (people from local market).

After a Forest User Group is formed, it is incumbent upon the group to manage and utilize the forests in accordance with the rules and regulations set by the group itself. However, according to the Forest Act - 1993, it is only upon the approval of the 'operational plan' for the forest, developed by user groups in conjunction with field staff of DFO, that the users' right to manage and utilize the forests are legitimized. The users are supposed to make their own decisions about the management objectives, rules and administrative



arrangements and users' contributions. It is pertinent to mention here that the process of formation of Forest User Groups in various parts of the district and registration with the DFO was still going on.

The area of community forests managed by the user groups under study varied from as small as three hectares to as large as 48 hectares. When viewed from the perspective of man-land ratio (total forest land owned by a user group divided by its total members), it was found to be ranging from a low of 0.072 ha in one group to a high of 0.979 ha in another group. This implies not only the prevalence of a great disparity in the forest land allocation among the users under community forestry, but also in the extent of poorness or richness of forest resource of a particular user group.

The size of the user groups included in this study varied from a minimum of 23 to a maximum of 117 household members. Each user group has its executive committee, known as Forest User Committee (FUC) from among its members, mostly by general consensus. The FUC is responsible mainly for the following tasks: (1) calling for general meeting of the user group whenever deemed necessary, (2) maintaining financial records and minutes of meetings held, (3) acting as liaison with the government, (4) implementing operational plan and (5) organizing labour for field operations such as plantation and nursery works. The number of office bearers in the FUC ranged from a minimum of nine to a maximum of 15. Of the 10 forest user groups selected for the study, only four groups had female members in their FUCs. The percentage of female members in such FUCs ranged from 20 to 36.



### **Socioeconomic Profile of the Respondents**

The characteristics of the sample respondents in the present study are examined in terms of the following aspects: age, gender, caste/ethnicity, family size and type, education, occupation, residential status, marital status, family income, livestock population, land holding and tenure status, and organizational membership.

#### **Age**

The average age of the respondents, in general, was found to be around 40, ranging from 17 years to 70 years. The frequency distribution of the respondents on the basis of their age groups, as young, middle aged and old, is illustrated in Table 3.

The largest portion (52 percent) of the respondents were in the age group of 36-60 years (middle aged). About 40 percent of them were found to be young, that is, age between 17 and 35. This confirms that a significant majority of the sample respondents were from middle to old-age groups.

#### **Gender**

A great majority (88 percent) of the respondents were found to be males and only a few (12 percent) of them were females. This reflects the under-representation of women in the Forest Users' Group, when contrasted against the female population (48.82 percent) of the district, thus indicating the prevalence of a male domination in the social system of forest users.

Table 3

## Distribution of Respondents by Age, Gender and Ethnicity

Characteristics of respondents	Number	Percentage
<u>Age</u>		
17 to 35 years	81	40.5
36 to 60 years	104	52.0
Above 60 years	15	7.5
Total	200	100.0
<u>Gender</u>		
Male	176	88.0
Female	24	12.0
Total	200	100.0
<u>Ethnicity</u>		
Tamang	33	16.5
Non-Tamang	167	83.5
Total	200	100.0

**Ethnicity**

One of the peculiar types of social groupings prevailing in Nepal is the ethnic grouping. The census data of Nepal recognizes 25 main ethnic and 35 caste groups. The total population of 18 million includes 63.2 percent as caste

groups and 35.4 percent as ethnic groups (Gurung, 1992). Nepali society is highly stratified into hierarchies and caste is the most visible hierarchy. Caste is still considered as an important factor in social interactions (Gilmour and Fisher, 1991).

The sample respondents included in the present study came from various caste and ethnic groups. The respondents from Chhetri, Brahmin and occupational castes constituted 23 percent, 21 percent and 10 percent respectively. The ethnic groups were Tamang (16.5 percent) and Newar (14.5 percent). The remaining respondents were from 'others' (15 percent), a category of minorities formed to include those who did not belong to any one of the above mentioned ethnic or caste groups.

As mentioned earlier, Tamangs form the largest proportion (21.5 percent) in the district statistics. However, the distribution of respondents in the sample on the basis of their ethnicity and caste varied from their proportion in the district. This could be due to the purposive selection of the FUGs in an attempt to include these ethnic groups in the study. Although Tamangs do not form a majority in the sample, yet for the purpose of the study the entire sample respondents were divided into two broad categories as Tamang and non-Tamang (Table 3).

### **Family Size and Type**

The 'small family norm' as advocated by the Family Planning Association of Nepal is a family composed of four persons; usually, a husband, wife and their two children. However, in this study, a family that consisted of not more than four members was considered as a 'small family'. A family with

five to eight members was treated as 'medium family', and the one composed of more than eight members as 'large family'. Table 4 provides the breakdown of the respondents by family size and type.

Table 4 shows that only 18 percent of the respondents were having small family. Looked from small family standard, it appeared that a greater proportion (82 percent) of respondents were in either medium (5 to 8 members) or big (more than 8 members) families. The average family size was 7.12, which is more than that of the national average of 5.6 and district average of 5.4 person (HMGN, 1992).

**Table 4**  
**Distribution of Respondents by Family Size and Type**

Family Size		Number	Family Type		Number
Small					
	Up to 4 members	43 (21.5)		Nuclear	103 (51.5)
Medium					
	5 to 8 members	106 (53.0)		Joint	77 (38.5)
Large					
	More than 8 members	51 (25.5)		Extended	20 (10.0)
Total		200 (100.0)			200 (100.0)

Note: The figures in the parentheses indicate percentage of respondents in the sample.

When the above table is looked at from the perspective of family type, it is apparent that little more than one-half of the respondents' families were of nuclear type, which according to Shepard (1984) is a relatively new type of family. This might be, as Shepard mentions, because of low productivity of land and small size of family farms, despite the extended family being the norm in less-developed societies.

Regarding the family type of the respondents, the same table depicts that slightly over one-half (51.5 percent) of the respondents were found to be living in the nuclear family. Whereas, about 39 percent were living in the joint family and outclassed the number of respondents living in the extended family, that is, one-tenth (10 percent) of the total respondents. These data reflect the respondents' preference to live in a new type of family rather than to live in a older type of large joint or extended family.

### **Educational Status**

The data regarding the literacy status of the respondents are presented in Table 5. Although majority (61.5 percent) of the respondents were found to be literate, yet it does not mean that all the literates had some years of formal education. Some of them were literate by virtue of functional adult literary courses conducted by other rural development projects for adult illiterates. The educational attainment of respondents ranged from no formal education to college/university education.

The respondents who did not have any formal schooling accounted for 67 percent. When considering only those who had formal education as actually

**Table 5**  
**Distribution of Respondents by Educational Status**

=====	=====	=====
Educational Attainment	Number	Percent
Illiterate	134	67.0
Primary	20	10.0
Secondary	42	21.0
S.L.C. and above	4	2.0
Total	200	100.0
=====	=====	=====

literate, such respondents formed 33 percent. The average years of schooling was found to be 2.52, while the maximum was 14 years.

The distribution of respondents by years of formal schooling shows that there were only two percent of the total respondents who had education above high school level. About one-tenth (10 percent) and about one-fifth (21 percent) of them had education up to primary level and secondary level respectively. Lack of opportunity on the part of the respondents due to inadequate institutions for formal education in earlier days coupled with non-existence of institutions for higher level of learning in the district could be attributed to the lesser proportion of literates and relatively lower level of education among the respondents.



### **Occupational Status**

The distinction between primary and secondary occupations of the respondents is of prime importance in the present study as they have bearing on the extent of utilization and management of forest products. For example, on the one hand, the respondents with farming as primary occupation may require relatively lesser quantity of tree products for their use as they get crop by-products from their own fields. On the other hand, those with other than farming occupation may need to use more of tree products due to lack of such by-products. Thus, it could be assumed that for those who require more tree products, their extent of participation is expected to be greater.

From the analysis of data, a very skewed distribution of respondents could be seen on the basis of their occupation. Table 6 provides the respondents' breakdown on the basis of their primary and secondary occupations.

The data in Table 6 show that an overwhelming majority (92 percent) of the respondents were engaged in farming as their primary occupation. This reflects that agriculture is the mainstay of livelihood. This also indicates the heavy dependence of rural population on agriculture. However, the rugged hill terrace, relatively smaller size of cultivated land coupled with low productivity renders the farming systems mere subsistence in nature. While a few (6.5 percent) were found to be service holders, only a negligible proportion of them were practicing either their caste occupation (leather-work) or businessmen. Caste occupation is a generational hereditary occupation based on social stratification under the Hindu caste system.

**Table 6**  
**Distribution of Respondents by Primary and**  
**Secondary Occupation**

Type of Occupation	Status of Occupation	
	Primary	Secondary
Farming	184 (92.0)	16 (8.0)
Service	13 (6.5)	6 (3.0)
Business	1 (0.5)	10 (5.0)
Caste	2 (1.0)	7 (3.5)
Labourer	-	21 (10.5)
No occupation	-	140 (70.0)
Total	200 (100.0)	200 (100.0)

Note: Figures in the parentheses indicate percentage of total respondents in the sample.

The same table also depicts the fact that of the total respondents, 70 percent had no secondary occupation, meaning that they were totally dependent on agriculture for their livelihood. As much as about one-tenth had been working as labourers besides their main occupation that of farming. From the above account, it is clear that the agriculture sector still remains as the economic base for hill dwellers.

### Residential Status

The duration of stay in the community for all respondents varied from a period of four years to 70 years. The mean length of stay was about 36 years.

The distribution of respondents according to their residential status revealed that a significant majority (79.5 percent) of the respondents were original residents while the remaining (about one-fifth) were migrants. A historical perspective on the population of Nepal indicates the important role of migration in changing the population size of different regions (Gurung, 1989). Migration within the country takes place mainly to areas where the potential means of livelihood are relatively much brighter than that of original places and where there are opportunities for employment. Usually, migration occurs from the hills to the plain region more often than within hills.

Chhetri and Pandey (1992) presented a case from the Far-western region of Nepal, in which four recently migrated households to the village were not being included as primary user group members. However, in the present study, irrespective of the length of stay in a particular locality, none of the households were reported to be precluded from the membership in the Forest User Group.

### **Marital Status**

A great majority of the respondents were married, which accounted to 96.5 percent. Only a few (3.5 percent) of them were single, and none of them were found to be either widow(er) or divorced or separated. Looking at the respondents' age that ranged from 17 to 70 years, the higher percentage of respondents as married seems reasonable.

**Annual Gross Family Income**

The total income of the forest users is one of the useful indicators of their economic status. The data regarding gross income per family of respondents showed a very wide variation, ranging from a low of Rs. 5000.00 to Rs. 85000.00 per year. The average annual gross income was Rs. 19030.72. The summary of the annual gross income for all the respondents is presented in Table 7.

**Table 7**  
**Distribution of Respondents by Annual Gross Family Income**

Amount of Income (Nepali Rupees)	Number	Percent
Below 10000	59	29.5
10001 to 20000	75	37.5
20001 to 30000	41	20.5
30001 to 40000	12	6.0
40001 and above	13	6.5
Total	200	100.0

**Herd Size**

The number of farm animals owned by respondents ranged from a minimum of one to a maximum of 26. On an average, the number of farm animals owned by a respondent was eight. The kind of farm animals domesticated by respondents included cattle, buffalo, goat and sheep, all of which feed on tree fodder.

Table 8  
Distribution of Respondents by Herd Size

Herd Size	Number	Percent
No animal	2	1.0
1 to 5 animals	73	36.5
6 to 10 animals	72	36.0
Above 10 animals	53	26.5
Total	200	100.0

As shown in Table 8, the respondents having 1 to 5 animals accounted for about 37 percent, and almost the same proportion (36 percent) of respondents had 6 to 10 animals. Those owning more than ten animals formed about one-fourth of the total respondents. It is also notable that two households of the respondents did not own any farm animals. On the whole, the data in the above table imply the domestication of farm animals as an integral part of the hill farming systems, *albiet* it is subsistence in nature.

Farm Size Holding and Land Tenure Status

In a predominantly rural-agrarian society, land is decisively the principal determinants of social status and economic position. Seddon (1988) states that the ownership of the means of production, and particularly of land, is central to any understanding of social and economic inequality in an agrarian economy. Table 9 provides the distribution of respondents on the basis of size of land holding.

**Table 9**  
**Distribution of Respondents by Land-holding Size**  
**Land Tenure Status**

Land Size	Number	Land Tenure Status	Number
Landless (0 ha)	3 (1.5)	Owner Operator	183 (91.5)
Up to 1 ha	110 (55.0)	Owner-tenant	14 (7.0)
More than 1 ha to 2.5 ha	84 (42.0)	Tenant-Operator	3 (1.5)
More than 2.5 ha	3 (1.5)		
Total	200 (100.0)		200 (100.0)

Note: Figures in the parentheses indicate percentage  
of total respondents in the sample.

The farm size categories followed here closely correspond to the norms set by the Agricultural Development Bank of Nepal to define small, medium and large farmers. According to this classification, those who own less than one hectare, between one hectare and 2.5 ha, and more than five hectares of farm land area are categorized as small, medium and large farmers respectively (Rana et al., 1988).

The size of land owned by respondents ranged from 0.01 to 3.75 ha. This scenario is what has been described by Seddon (1988) as highly unequal structure of land-ownership in Nepal. The average size of land owned by respondents' households was 0.893 ha, which is relatively higher than that of



the national average of 0.5 ha. This average size is in line with what Lake and Shady (1993) state about the condition in developing countries, where the majority of farm holdings are less than one hectare and they often exist in several scattered plots. This is because of the systems of generation to generation inheritance that often led to further fragmentation.

The respondents holding a land size of up to one hectare constituted the majority (55 percent), thus reflecting the characteristics of peasantry who base their lives on subsistence kind of farming. Little more than two-thirds (42.0 percent) of the households had land size between 1.01 and 2.5 ha. Only a few (1.5 percent) of the respondents owned more than 2.5 ha, and the same proportion of respondents did not own any land.

The table also reveals that a significant majority (about 93 percent) of the respondents had self-operated lands. In other words, this large portion of respondents were owner-operators. The remaining seven percent had characteristics of owner-tenants, who rented in lands from others, besides operating their own land, to cultivate on share-cropping basis. A few (1.5 percent) of respondents were tenant operators, who did not possess any land of their own, but had rented in from others.

It was also found that some tenants were allowed to grow trees even on rented lands on condition that the landlords get their fair share of it.

### **Organizational Membership**

It was found that, of the total respondents, only about one-fifth of them had membership in organizations other than the forest user group. Those

organizations included: Cooperatives, Drinking Water Users Group, Health Club, Livestock Production Group, Non-Formal Education Group and Village Development Committee.

Further probing on the extent of membership revealed that of those who had membership in various organizations, about one-third were office bearers and the remaining two-third just ordinary members. While a great majority (about 80 percent) of them were member of only one such organization, the remaining were members of more than one organization.



## CHAPTER V

### CONTEXT OF PARTICIPATION IN COMMUNITY FORESTRY

This chapter explains the elements of community forestry programme that provide the contextual background, within which people's participation in community forestry programme is to be understood. As has been mentioned in Chapter Two under the conceptual framework section, participation does not take place in a vacuum, and there should be some context. Although it is difficult to set a complete context of participation in forest management, yet understanding the context is essential in order to establish a well-based forest policy with reference to people's participation.

#### Forest Management

To understand the management practices in the study area, information were gathered from individual respondents and other people through formal as well as informal interviews, and group discussions. In addition, the oral histories about the forest situation were obtained by interviewing exclusively the village elders and knowledgeable persons.

#### Community Forest Management

The systems of forest management that prevailed in the study area over a historical period have been described at length in Chapter Four. This section describes the practices of forest protection, as observed and perceived by the local inhabitants, between the period when the community forests were known as '*Panchayat Forest (PF)*' and '*Panchayat Protected Forest (PPF)*', and after it has been designated as '*Community Forest*' following the political change in 1990.

The implementation of community forestry programme under the rubric of PF and PPF did not appear to have imprinted a good impression on the local people. This is because forests were handed over to the Village Panchayats, instead of to the local communities, for protection and management. The forest areas were brought under the strict control of the District Forest Office. This laid the local people aside from any legal right of access to forest resources. The common forest was being managed through the so-called user's committee of the user group, with Ward Representative to the VDC as chairman, who might not necessarily be from among the users of the resources. The local inhabitants expressed their grievances about their being precluded from the benefits to be accrued to them from their participation in the afforestation programme. In the early stage of the implementation of the programme, village people acted collectively in an effort to use the forests judiciously and protected them from degradation. Later, as the forestry programme gradually became reluctant to pay attention towards the need and problem of the community, so became the local residents to extend their cooperation in the protection and management of the forests. The local institutions in the form of 'forest protection committees' then were reported to be of neither formal nor strong enough for local users to seek rights to manage and utilize forest resources. This was because the PFs and PPFs were under the control and supervision of the then Village Panchayats, wherein the users lacked direct control over community forests.

Regarding the forest protection practices under the current community forestry programme compared to the one being managed as PF and PPF, about three-fourths (76 percent) of the respondents were of the opinion that the

existing community forestry programme had taken better shape. This was mainly because of dramatic shift in the role in management system from the Forest Department's autonomy to a participatory management system. They were also convinced of the fact that 'true community forestry', expressed in their own version, has come to stay. Nevertheless, one-fourth (24 percent) of the respondents still did not perceive any differences in forest management practices under these two community forestry programmes.

The aspects that respondents liked most in the existing community forestry programme were: (1) policy of the DFO to involve forest users in management, (2) forests had been better protected, (3) people showed more interest in forest development through afforestation and protection activities, (4) user groups appeared to be more organized or formalized, (5) restricted use of forest resources, (6) norms regarding forest management practices followed more strictly by the users and (7) development of a sense of belonging, that is, 'our forest', among the members of the local community.

The villagers in the study area reported that things turned out to be well only after the PF and PPF were converted to the current status of community forest. Several group discussions conducted, during the field survey in the study area, concluded that the forest management systems under the existing community forestry programme was comparatively better than previous PF and PPF.

Whenever a member household of a user group needed forest products in bulk for such special events as wedding, religious activity, cremation, the user committees issued permission to procure tree products from their respective



community forests. There was a provision to deal with the violators by the committee and those found guilty were subjected to varying punishment depending upon the seriousness of the offense. One of the forms of penalties was in cash fines, which would eventually go to the FUG's account. In contrast, community forestry under PF and PPF, the income from community forests was not received by the villagers. Except for major conflicts that required legal assistance, minor conflicts that arose were resolved mostly through group consensus. Some of the user groups that were undertaking management responsibilities had made arrangements for guarding of forests by themselves on rotational basis. Above all, what has been realized by local communities as strong positive aspect was the fact that forests under the current CFDP have been better managed in comparison to what used to be when these forests were designated as PF and PPF.

Nevertheless, pointing out the deficiencies in CFDP, people in communities still realized the inadequacy of technical and administrative assistance from the government to the user groups and the need for more plantation to repair the damage and losses caused earlier.

### **Utilization of Forest/Tree Products**

The responses regarding the utilization pattern of tree products indicated that almost all (99.5 percent) of the respondents' households were found to be using fuelwood for cooking purpose. A significant majority (91 percent) of them utilized the tree products for heating and roofing their houses.

Similarly, forest products were also being used by a great majority of the respondents' households for various farm purposes. These included fodder (97

percent), cooking animal feed (97 percent), branches for fencing of farm (75 percent), construction, repair and maintenance of animal sheds (96.5 percent), making handles of farm tools and implements (90.5 percent) and leaf litter for making compost (68 percent). These results suggest that the existing forests still continued to be at stake, thus indicating a need for immediate and continued action for further improvement of forest condition. This is especially true when the present pattern of utilization of forest products, without any precaution for future is considered.

### **Dependence on Forest Products**

Dependence on forest products in this study refers to the degree of reliance of the individual members of the FUGs on the tree products in terms of the extent of fulfillment of their fuelwood and fodder needs from various sources.

It has been illustrated earlier that rural people required tree products for various household as well as farm purposes. When the need is indicated, it also becomes a matter of concern as to how these requirements are being met. In order to ascertain this, the respondents were asked to indicate the number of days, weeks or months in a year for which they had enough tree products fulfilled from their own lands.

As portrayed in Table 10, slightly more than three-fourth and about two-third of the respondents had the supply of fuelwood and fodder, respectively from the private sources. However, the extent of supply of such tree products varied greatly among them. The other sources, as indicated by the respondents in order of intensity, included the national forest, community

forests and local vendors. Besides these sources, the requirements of fuel and fodder were also supplemented by agro-wastes. The respondents who were completely dependent on sources other than private land for fuelwood and fodder accounted for 22 percent and 31.5 respectively.

**Table 10**

**Distribution of Respondents by Level of Dependence  
on Private Forest for Fuelwood and Fodder  
(N = 200)**

Level of Dependence (Percent)	Type of Tree Products	
	Fuelwood	Fodder
0	44 (22.0)	61 (31.5)
1 to 10	14 (7.0)	20 (10.0)
11 to 20	10 (5.0)	6 (3.0)
21 to 30	8 (4.0)	9 (4.5)
31 to 40	17 (8.5)	15 (7.5)
41 to 50	34 (17.0)	13 (6.5)
51 to 60	21 (10.5)	23 (11.5)
61 to 70	18 (9.0)	23 (11.5)
71 to 80	12 (6.0)	17 (8.5)
81 to 90	15 (7.5)	7 (3.5)
90 to 100	7 (3.5)	6 (3.0)
Total	200 (100.0)	200 (100.0)

Note: The figures in the parentheses indicate percentage of the total sample respondents.

On the whole, very few (7.5 and 3 percent of respondents in the case of firewood and fodder respectively) were found to be self-sufficient in forest products. This demonstrates that the people were still dependent on forests, which provided them with essential inputs of fuelwood, fodder and construction timber or sawn for farm and home. This conclusion contradicts Bartlett and Nurse (1992) who found farmers' dependency on forest products from community forests in many cases as false notion.

### **Handing over of Community Forests**

Handing over of substantial proportion of forests to the local people, particularly in the hills of Nepal, has been a long standing policy since 1978 with the introduction of Panchayat Forest (PF) and Panchayat Protected Forest (PPF) rules. Similarly, handing over of all the accessible hill forests to the communities in phases, to the extent that they are able and willing to manage them is one of the strategies stated in the Master Plan for the Forestry Sector Nepal. The recent forest policy also decrees that the community forests are to be managed with the active support and involvement of forest users.

Despite the provision under Forest Act 1993, it was learnt from the District Forest Office that forest lands were being handed over to the community only with the approval of the Regional Forest Directorate. In fact, this procedure used to be followed for handing over of the forests designated as PF and PPF, where prior sanction of the Regional Director was necessary (Kayastha and Karmacharya, 1987). That is why people in the community also articulated their grievances about the slackness in the process of handing over. This could also be illustrated by the fact that of the 10 user groups selected for

the study, only two FUGs (*Toplang Samudayik Ban* and *Sugure ko Ban*) forests have been handed over. There were also quite a good number of user groups, to which forest lands had yet to be handed over in spite of having registered with the District Forest Office long ago. This conforms to the report of Fisher et al. (1989), who assert that despite the legislation and clear intention at the policy level, very little forest land has actually been handed over to the community or the rate of handover has been slow.

The same authors, referring to Sanwal (1989) who maintains that in the hill areas of Nepal, the government through legislation in 1976 transferred control of forest areas to local communities, argue that the statement is highly misleading. In a similar vein, Sharma (1992) reports that while forestry policy including the Master Plan for the Forestry Sector stresses the handing over of forest-lands to community for management and utilization, only about two percent of the total forest has been transferred to 800 groups so far.

The slackness in the process of handing over also appeared to be due, in part, to the users' lack of creativity and interest in themselves. It could still be observed that many of the user groups have not yet registered themselves with an operational plan duly prepared with the cooperation of the forest assistants. Two such user groups included in the study were *Okhle Pakha* FUG and *Tar Danda* FUG. The requirements for formation of community forestry committees and getting management plans approved before forests are handed over has been referred to as bureaucratic constraint by Wallace (1988). His argument, for slow handing over, is that communities have not customarily used formal committees created by or for government agencies, or written plans conforming to technical guidelines to manage local resources.



The respondents were pinpointing the significance of recognizing of the user groups through the process of registration with the DFO. A significant majority (98.5 percent) of the respondents felt the necessity of recognition of FUGs by the DFO. All the respondents deemed that handing over of community forest is a necessary condition for legal security reasons and a sense of ownership. The logic stated behind the importance of such a recognition were: (1) to legitimize their rights to manage and utilize forest resources; (2) to have a feeling of accountability on the part of users for managing the forests; and (3) to have a sense of belonging over the forest land as 'our forest' in a legal sense.

It is interesting to note that in all the group discussion held, there used to be one strong single voice to indicate that 'handing over of the forests is one of the first and foremost important tasks the DFO ought to do before the users are asked to voluntarily contribute towards forest conservation'. This is mainly because of the fact that the State possesses the *de jure* ownership over the forests, whereas the users have just the *de facto* ownership. The local people also appeared to be either sceptical towards the government or were afraid that their rights of access to forest resources would be taken away from them.

The small group discussion session as well as individual informal interviews held with villagers also led to the conclusion that the handing over of the forest lands is an imperative step towards getting local people mobilized for the management and protection of forest resources. The people in the communities were also of the view that handing over of the forests to communities for management, would act as an impetus to motivate themselves to come forward to cooperate with the government. The members of those



FUGs, to which community forests have yet to be handed over, expressed the necessity of legal authority to manage forests.

### **Gender Concerns in Forest Management**

For understanding gender issues in natural resource management, one must analyze gender roles and differences in terms of involvement and division of labour that exist in a particular social system. Agrawal (1992) maintains that a gender-specific analysis of the social dimensions of environmental degradation is necessary on the basis of welfare, efficiency, equity and empowerment considerations.

Priority to mobilization of women in community forest management has been stated as one of the main policies of the Government of Nepal (Neupane, 1992). The importance of involving women in community forest management has been acknowledged by several authors as well as agencies (Inserra, 1988; Gregersen et al., 1989; Siddiqi, 1989; MFSC, 1990; FAO, 1991; Regmi, 1992). This is because rural women are the major and most frequent users of forest products at the local community level. Women also possess knowledge about various species of wood for cooking according to their different heating qualities. In this regard, Fisher and Malla (1987) argue that people who actually collect forest products must participate in the management process. Further, while Hobley (1987) argues on a moral basis the need to integrate women in forest management, Fisher et al. (1989) do so on practical grounds.

In this study, the gender differences have been assessed with respect to the extent of involvement of men vis-a-vis women in the procurement of tree products and in CFDP. Gender involvement in the procurement of forest

products was assessed in terms of the amount of time spent by males and females in collecting tree products such as fuelwood and fodder. The time spent was worked out by utilizing the total hours spent by both male and female members of the households in a day, the total number of such days in a month and the number of such months in a year. The cumulative amount of time (hours) spent by both males and females was used as the parameter on the basis of which the extent of involvement was determined.

The findings show that women were found to be involved more than the men folk in the procurement of tree products. Of the total time invested in fuelwood collection, about 65 percent of the total time was found to be contributed by women alone in contrast to their male counterparts whose share was only about 35 percent of the time. Similarly, in the case of fodder collection, the female household members contributed more than half (about 53 percent) of the labor time required. It is pertinent to mention here that the procurement of tree products for household purposes is a job which carries no exchange value as it is considered a household task that lies outside the sphere of economic activity. This is clearly a difference in division of labor along gender lines, whereby more women are confined to the domestic production, which is not considered an economic activity.

Women's responsibility to cook was one of the main reasons for their more involvement in tree products procurement tasks. Mediated by the prevailing traditional division of labour along gender lines in the rural households and lack of the alternative sources were the main reasons, stated by the respondents, that kept rural women confined to unpaid domestic activities that also include procurement of tree products.

Women's participation in terms of their membership in the Forest User Groups also appeared to be well under-represented. This has been illustrated by the involvement of only a small minority (that is, 12 percent of the total member households) of female members in FUGs. Differential domination along gender lines could also be observed in the case of Forest User Committees, in which women's total numerical strength was about one-tenth (11 percent) only. These findings are close to that of Chhetri and Pandey (1992) who, from a study of user group forestry in the Far-western Region of Nepal, found that despite being the main users and collectors of tree products, women were not invited to attend the public meetings because of prevailing local norms and values that precluded women from participation in such meetings with their men-folk.

It is also pertinent to note that, in all the villages under study, women had practically no significant role in CFDP activities. The information regarding differential gender roles in CFDP activities were obtained from the small group meetings as well. It was realized that women often lacked the knowledge and experience in handling the administrative tasks such as committee work, holding formal discussions, and in dealing with government officials for specific matters including legal ones related to community forestry. The reasons for their handicap in this regard could be because of their poorer educational background and low or no exposure to outside world. Besides, the traditional socio-cultural norms also constrain the females going out of their houses without the permission of male members.

The above results indicate that there exist considerable differences between men and women in terms of their role and relationships in the management and utilization of forest resources as well as their representation in the FUGs and FUCs. The findings suggest that a more deliberate attempt be made to involve women in CFDP in order to have far reaching effects in view of promoting local participation.

### **Institutional Arrangement in CFDP**

The current community forestry programme of Nepal can be viewed as having a triangular relationship of interdependence involving the forests, people and the government. While it is the government's activities to formulate and implement the policies, it is for the village people to physically manage the forests legally owned by the government. So it is through these activities that the government, people and forests are interrelated.

The present study seeks to understand the respondents' perception regarding the institutional arrangement in terms of (1) the extent of support services received from the government by the local community; (2) the legal authority provided by the government to the FUGs for undertaking forest management activities; and (3) the magnitude of power the individual FUG members wield in order for them to become capable of participating in CFDP activities.

### **The Support of the Government**

It is incumbent upon the government to provide the FUGs with technical, managerial, administrative and financial assistance for the latter to organize

and function pertaining to the community forest management. It is pertinent to mention here that all these government services, in this study, is termed as politico-administrative support. The respondents' responses regarding the extent of politico-administrative support received by their user groups were recorded in the pattern of 'active support', 'support' and 'inadequate support'. Table 11 presents the data pertaining to the extent of government's support, as perceived by the respondents, to forest users.

By and large, the respondents reported that their FUGs had been receiving the necessary government support. However, Table 11 also reveals the majority (57.5 percent) of respondents' complaint about the inadequacy of such support. The remaining (42.5 percent) of them reported such support as fairly adequate. Among 115 respondents reporting inadequacy of the Forest

**Table 11**  
**Distribution of Respondents Reporting the Perceived Level of Government's Support (N = 200)**

Level of Support	Number	Percent
Active Support	22	11.0
Support	63	31.5
Inadequate Support	115	57.5
Total	200	100.0

Department's support, about one-fifth of them advanced several reasons. Of these problems, the one they accorded as the most important was about the field staff's reluctance or inability to spare their time for the preparation of the



operational plan. The lack of an operational plan on the part of an FUG deter itself from registering with the DFO. Likewise, about 45 percent of the respondents from this category expressed grievances about the slowness of handing over process of the forests to the users. The other complaints included: irregular and lesser frequency of visits of field staff; insufficient financial assistance; and limited supply of materials for plantation and forest guards. In considering the extent of supportive role to be played by the Forest Department, the findings of the study appeared to have portrayed a little gloomy outlook over quantum of as well as the manner in which services were being extended to the FUGs.

The respondents were also of the view that their user groups needed government's assistance in legal matters especially in the event of major conflict and dispute arising from demarcation of forest boundaries and imposing sanctions against the violators of the rules and regulations as underlined in the operational plans. Their views also indicated that the government is supposed to be playing a supportive role before as well as after operational plans have been approved and the forest land handed over. Preparation of operational plan, technical information, layout and demarcation of forest area, conflict resolution, legal advise, including sanctions against defaulters, material and financial help, are the major matters in which villagers wished that the State should play supportive role in the process of managing the community forest lands.

The above accounts show that there is a need for the government to take into consideration such aspects as spatial equity and administrative uniformity in providing services to the user groups under its jurisdiction. In other words,



providing the user groups with the necessary support and services become an important agenda for the sponsoring agency while framing policies. This is also indicative of the fact that the user groups need to become self-reliant in terms of protection, management and other forest development activities after the authority to manage the forest has been handed to them by the government. This, however, does not mean that the user groups are no more in need of having interaction with the government. The need for continuous as well as harmonious relationship is still there because the community forests are State-controlled. The State also acts as the central authority, under whose jurisdiction the user groups are to operate in relation to forest management. Thus, while there seems to be a dire need for positive support from the government, there should also be a continuous effort for user groups to be self-reliant for their long term sustainability.

The community forestry being a joint management endeavor, the effort by the government alone is not sufficient. The review of literature indicated that the success of such a programme rests much on the local people themselves. Given this reality, mere fake participation of these people cannot translate the programme into a meaningful action. The question then arises is the accountability on the part of the users when their genuine participation is really going to contribute to the forest development. Against this backdrop, the respondents were asked a question 'to what extent has your group been able to successfully perform the tasks related to community forestry'? The major tasks of the users include preparation of operation plan, field operations like plantations, nursery establishment, holding general meetings of the group, and transaction with the District Forest Office.

While the majority (67 percent) of the respondents reported that their user group had been able to fulfill all the targets they had set as group activities, about one-third (33 percent) of them expressed their groups' inability to do so. Irregularity and carelessness in timely carrying out group's activities on the part of the members of the FUG was stated as one of the main reasons for their lower level of accountability.

### **Administrative Decentralization**

The fact that community forestry should be designed and implemented by the people themselves at the local level, demands for a legal authority on the part of the users to do so by developing an operational plan. If the emphasis is on meaningful local representation, then a rationale for decentralization is that the people be vested with the legal authority in order to ensure their genuine participation.

This study is to seek the rationale behind the devolution of authority from the Forest Department to the FUGs in the management of forest resources. However, since the pros and cons of decentralization cannot be decided in an empirical vacuum with reference to a particular period, location and context, the opinion of concerned people in this regard was deemed essential. Operationally, this variable was measured by using a Likert type scale consisting of eight items.

The distribution of respondents by their score on the extent of decentralization in Table 12 reveal that the score obtained by all of them was above 16. This is clearly an indication of the fact that the sample respondents perceived the decentralized administrative system as an important aspect

in the bureaucratic structure of the Forest Department. In other words, there is a need for the concerned agency to transfer a greater extent of authority to the user groups for mobilizing the local communities to manage the forests. This finding receives support from many authors (United Nations, 1975; Finsterbusch and Wicklin, 1989; Fisher, 1990) who have argued in favour of decentralization for achieving effective participation in rural development programmes.

**Table 12**  
**Distribution of Respondents by Scores on Decentralization**  
**(N = 200)**

Scores	Number	Percent
17 to below 24	30	15.0
24 to below 29	139	69.5
29 to 32	31	15.5
Total	200	100.0

Mean = 25.75; SD = 2.69

### **Empowerment of FUG Members**

The CFDP envisages that the villagers would manage the forests as a group in accordance with the operational plan. However, as found earlier that the FUG, as a social category was not a homogeneous group in terms of socio-economic characteristics. An important principle adhered to this fact is the concern for empowerment, whereby every member of an FUG would wield power to enhance their individual participation.

Viewed from the above mentioned perspective, empowerment at the individual level is crucial. This is because the traditional Nepalese social structure is one of masters and followers, where participation of those who are close to the bottom of the social structure is relatively difficult in the face of dominant characteristics of those at the top.

It is only now that the new forest policy envisages the local people as responsible body to physically manage the community forests. Given this context, strengthening the capabilities on the part of these people to involve in CFDP activities becomes an important issue that needs to be addressed. The intention of this study, however, was not to analyze social inequality in terms of power differences that might prevail among members of the FUG. The concern was to examine whether or not the local communities, as perceived by the respondents, felt capable in terms of the power they possessed in order to get themselves involved in the matters related to forest management.

Table 13 shows the distribution of respondents based on the scores on perceived extent of empowerment. It is evident that all the respondents scored more than 16 points, thus confirming a need for strengthening the capabilities of the members of the user groups to participate. In the absence of this egalitarian view in relation to power distribution, it is likely to repeat a situation described by King et al. (1990), from their study conducted in the middle hills of Central Nepal. They reported that a meeting of forest users dominated largely by local politicians constrained the women and poorer, low caste people from voicing their opinion. Thus, they were rendered to simply agree with what was decided at the meeting.

**Table 13**  
**Distribution of Respondents by Scores on Empowerment**  
**(N = 200)**

Scores	Number	Percent
23 to below 26	44	22.0
26 to below 30	115	57.5
30 to 32	41	20.5
Total	200	100.0

Mean = 27.5; SD = 2.37

During the field survey as well as from informal interviews, it was found that some of the respondents together with non-respondents complained about the domination in FUG activities by a particular group of people belonging to either the higher caste or economic status. Therefore, when local communities as a whole are taken into consideration as an integral part of the development programme, it becomes imperative that every member of a social system, irrespective of their socio-economic status, be provided with the opportunity of getting into such schemes.

**Structural Elements and Forest User Group**

Forest User Group (FUG) as a local organization, acts as a body through which its members govern their activities, organize themselves for participation and at the same time articulate their problems. According to the new Act (Forest Act-1993), a user group must be registered with the respective District Forest Office for the former's recognition by the latter as a legal body



to manage and utilize community forests. Forest User Group is such an organization conceived as a formalized informal local organization, that lies outside the government bureaucratic organization, formed at the community level for the purpose of development, conservation and utilization of forest resources. It is a corporate body organized largely based on the settlement or household which is entitled to manage and utilize the forests. In general, a user group contained those households which have long been utilizing a specified patch of forest-land to meet their basic tree product needs.

In this section, FUGs are analyzed in terms of structural attributes that are likely to be favourable or unfavourable for their functioning, from the perspective of respondents participating in CFDP. In many cases these attributes demand amendments and alterations depending upon the nature and function of the organizations in order for them to function effectively.

### **Dimensions of Function in Forest User Group**

As have been reported earlier, some of the respondents were having membership in more than one organization. It is also possible that a particular local organization pursues more than one kind of rural development projects in a situation where integrated rural development programmes are going on. In Dhading District, a number of government as well as non-governmental rural development projects were on the way. The present study seeks to understand the effectiveness of local organizations undertaking only one and more than one project concurrently in terms of their performance. Of the 10 user groups included for the study, only one group was found undertaking two projects



simultaneously, that is, 'forestry' and 'drinking water'. The rest of the groups had only the community forestry project.

The findings revealed that the respondents did not differ in their view regarding their groups' performance, when looked at by number of functions. In other words, respondents from either group reported that their organizations had been effective in terms of carrying out the activities assigned to them. It can, therefore, be deduced that the number of functions undertaken by a particular group has nothing to do with its performance, because advantages as well as disadvantages are likely to be present in both the situations. This deduction seems to corroborate with Esman and Uphoff (1974), who reported that multi-functional local organizations were more likely to build up both the resources and with the commitment from members to operate effectively over time. At the same time, it also did not seem to contradict with Fals Borda (1976), cited in Esman and Uphoff (1984), who concluded in favour of single-function organizations.

### **Mode of Formalness of Forest User Group**

Forest user groups, under the current forest management system within the purview of Community Forestry Programme, are supposed to be the formal organizations at the community level. Before the advent of Community Forestry Programme, there used to be organizations that were more in the informal mode. This gets into the issue of organizations that are not cognate with each other. One of the ways to make a distinction between these two is on the basis of their origin. An organization that is formed by the initiation of a local people themselves without the influence of any external sources, but with

traditional norms and power structures, may be termed as an informal organization. In contrast, a formal organization is formed with the initiation coming from outside the local community. The rules and procedures followed by formal organizations are relatively recent in origin.

Unlike the traditional forest management system of the past where there was no central authority involved, the current forest management system is a sponsored system in which the government is an outside agency that facilitates the setting up of a local organization of forest users. Under this management system, a forest user group would be entitled to legally manage and use forest products only after it has fulfilled all the official formalities outlined by the District Forest Office. This means that a collection of local people are reckoned to be a formal organization in order to get itself registered with the DFO.

In the literature (Hunter, 1976; Esman and Uphoff, 1984; Sherraden, 1991), however, there appears a controversy regarding the effectiveness of local organizations being either formal or informal. Against this backdrop, the present study sought the respondents' opinion about the necessity of formalization of their user group in order for it to function more effectively. The views of the respondents in this respect were found to be close to the hypothesis of Dore (1971), cited by Esman and Uphoff, 1984, that organizations reflecting traditional norms and power structures would be unable to perform more modern developmental tasks. This has been supported by the fact that an overwhelming majority (98.5 percent) of the respondents were in favour of having their forest user groups as formal organizations,

although some of these FUGs were yet to obtain the status of a fully formalized organization.

It is interesting to note that the villagers who had managed forests for the past several decades without strong formal organizations have now come to opt for formal organizations. The reasons stated by them in preference of a formal organization to an informal organization is that by being formal the user groups would get official recognition from the DFO. Besides, a local organization would be in a better position to be more organized in terms of responsibilities to be borne by each member of FUG including the FUC members. The local residents, having referred to their earlier experience, cited the example of the popular proverb "everybody's responsibility is nobody's" in order to stress the need for a more formalized organization.

There were three distinct categories of Forest User Groups found in the study villages. Included in the first category are those user groups which have been registered with the DFO and to which the forest land has been handed over by the DFO. The second category of users are those which have already been registered with the DFO, but are still waiting for the forest land to be handed over to them. The user groups that come under the third category were those which have neither been registered with the DFO, nor have obtained the management and utilization authority of the forest land from the DFO.

Of the ten user groups selected for the purpose of the study, only two groups came under the first category mentioned above. The number of groups falling under the second category come to be six and the remaining two groups belonged to the third category. It must be mentioned here that, though all the

categories of FUGs have been managing the forest land, to which they were affiliated, yet they performed with varying degrees of effectiveness. In other words, while some of these user groups were only protecting the forests by imposing restriction on their members on harvest of any kind of tree products, other groups had been protecting as well as utilizing tree products simultaneously. Therefore, one could speak of a continuum of local forest user groups with full fledged *de facto* ownership over forests to a situation where user groups have no legal protection and utilization authority.

It has been mentioned earlier that for FUGs to get registered with DFO, they must have an 'operational plan', which signifies the degree of formalization in terms of characteristics of a formal organization. Viewed from this standard, it was found that of the total ten FUGs selected for the study, only two user groups came under the category of 'less formal', while the rest of them fell under 'more formal' type. Accordingly, of the total respondents, a great majority (79.5 percent) of them belonged to more formal groups and the remaining 21.5 percent represented the less formal groups.

### **Decision-Making in Forest User Group**

It was found that an overwhelming majority (95 percent) of the respondents had strongly opted for 'general assembly' kind of decision-making pattern in preference to other patterns. The logic given was in line with the view of Fakolade and Coblentz (1981) who state that decisions reached through maximum public involvement are most likely to have minimum opposition, thus reducing friction, easing implementation, and avoiding expensive reversal of decisions. The respondents believed that this system of decision-making

would make every member feel more accountable to what had been decided upon by themselves. There were only a few (5 percent) respondents who preferred the FUC to be a decision-making body for their groups. Interestingly, none of the responses indicated that an authoritative decision-making structures as preference for making decision.

In any organizational situation, various types of decision-making structures generally exist. Sticking to this standpoint, the respondents' opinion about the structure of decision-making within their user groups was also sought in order to find out the decision-making pattern preferred by them. Attempts were made to find out the decision-making pattern being followed by user groups in three major areas, namely, 'imposing sanction', 'nomination of delegates' to dialogue with government personnel, and 'implementation of group activities'.

The responses on the decision-making patterns, that had been prevailing in their user groups, related to imposing sanctions, nomination of delegates, and implementation of group activities, have also been obtained from the respondents. The majority (79.5 percent) of the respondents indicated that the 'general assembly' used to be the influential decision-making body in the case of decision on sanctions. About one-fifth (21.5 percent) perceived the FUC as the responsible body for decision-making, and very few perceived the Chairperson of the FUC/FUG alone as influential decision-maker. Nevertheless, the majority of the respondents (78.5 and 52.5 percent in the case of nominating delegates and implementing activities, respectively) perceived that it used to be the decision of the FUC members. While, little less than one-half (46 percent) of the respondents stated that the decision in matters



related to the implementation had been based on the voice of the general assembly. Only about one-fifth (19.5 percent) reported a similar pattern of decision-making in the case of selection of representatives for delegation.

The above accounts show that the decisions regarding sanctions have been in accordance with the general preference of the majority of the members of user group. All the same, it was found to be the converse of the decision-making pattern preferred by the majority of the members of the user group, so far as selection of delegates and implementation of programme activities were concerned.

From the informal interviews held with the local inhabitants, it was also learnt that some persons who were so-called influential in the local rural community by virtue of their either higher socio-economic status or numerical strength, had played a dominant role in decision-making. This type of situation was also observed, in two of the meetings conducted by the local people about forest management during the period of data collection in the village. During those meetings only a few influential persons were found to be more articulate and dominant than others in the discussion. This is clearly a type of decision-making structure that appears less democratic in approach in contrast to decision-making in the case of sanction, which looked more participatory in approach.

### **Size of Forest User Group**

The present study focused on the size of FUGs and their relative effectiveness in forest management. The size of user groups being included in this study varied from a minimum of 23 to a maximum of 117 member



households. It was noticed that irrespective of the group size that existed, only about 11 percent of the respondents felt their groups as small and hence, opted for a size little bigger than their respective groups. One reason stated for preferring a bigger group was that if they had more people, more strengthen would be the group in numerical terms to protect and manage the forests. However, the number of members suggested by these respondents in any of their groups did not exceed more than 110 households. Interestingly, none of the respondents belonging to a group that consisted of 117 household members realized their group as small. Instead, 17 percent of the respondents from this very category perceived their group as being too big for them to function effectively. The group size preferred by them ranged from 80 to 100 members for three main reasons: (1) conflict would be less frequent in smaller groups, (2) more convenient in handling and (3) effective communication among members. The group size preferred by the respondents is quite close to that of the size stated by Doherty and Jodha (1979). According to these authors, a group of 100 farmers are suited to long term maintenance and can enforce the rules necessary to keep up group action on their own. On the other hand, King et al. (1990) described a forest user group made up of 544 households covering many villages and caste groups. They considered this group as large for it did not possess any sense of 'common identity' or 'community' and lacked any organizational basis for acting together.

In all, a great majority (79 percent) of the respondents reported the present size of their groups as 'optimum' to call it effective in terms of groups' working performance in managing forest lands, to which they were affiliated.

While about one-tenth (11 percent) of them felt their group as too small, almost same proportion of them (10 percent) felt their groups as too big.

It is apparent that, despite a wide variation in terms of the number of members that make up a group, most respondents considered their respective group size as neither 'too large nor too small'. This could be due to the existence of larger per capita forest land (a ratio in which proportion of forest land is relatively higher than that of man) as well as compatibility in terms of working condition in a group situation among the members.

Based on the size of a group preferred by the respondents as well as their working experience with the existing groups, it can be deduced that an optimum size of group is one which should contain members ranging from 80 to 100.

### **Interaction System in CFDP**

As any other human organization, the FUGs are also informational systems wherein exchange of information takes place between the FUGs, and among members in order to be informed about the matters related to forest development programmes. Exchange of information is also likely between the FUGs and the government agency concerned.

There were three types of linkage patterns, namely, FUC-FUG linkage, FUG-FUG linkage and government-FUG linkage examined in the present study. The distribution of respondents according to type and strength of linkage is summarized in Table 14.

**Table 14**  
**Distribution of Respondents Reporting Strength of Linkages**  
**(N = 200)**

Strength of Linkage	Type of Linkage		
	FUG-FUG	FUC-FUG	Government-FUG
Strong	129 (64.5)	117 (58.5)	92 (46.0)
Weak	71 (35.5)	83 (41.5)	108 (54.0)
Total	200 (100.0)	200 (100.0)	200 (100.0)

Note: The figures in the parentheses indicate percentage of the total sample respondents of the column.

From the data presented in the above table, it is patent that the majority of the respondents had strong FUG-FUG (64.5 percent) as well as FUC-FUG linkage (58.5 percent). Interaction among the members of FUGs is a desirable condition. As Pradhan (1993) asserts, in several places in Nepal, farmer-to-farmer exchanges have proven to be very useful in strengthening their organizations in the case of water users. This is because they can relate to one another since they share more or less the same experience. Nevertheless, in the case of government-FUG linkage, the case was found to be the other way round, wherein the majority (54 percent) of respondents had weak linkage. Further probing on government-FUG linkage revealed that the respondents who had more frequent contacts with Forest Officers at DFO, Rangers/Assistant Rangers and Forest Guards respectively constituted 8.5, 30.5 and 24 percent.

The respondents, who had either no interaction or relatively less frequent interaction with their other group members and the members of FUC reasoned that they neither felt any necessity nor knew the significance of interaction with them. Absence of visit of officers to village, long physical distance to be traveled to contact them, never tried to contact, and never felt necessity to interact with them were the major reasons given by the respondents who had either no interaction or relatively less frequent interaction with their group members and the members of FUC.

### **Extension and Training in CFDP**

Extension must be considered as an integral part of community forestry programme rather than as an additional activity (Malla, 1987). The community forestry programme seeks the involvement of local people in all the stages (decision-making, implementation and benefit sharing). Given this condition, to keep the members of FUG abreast of latest information regarding the plans, policies, legislation, rules and regulations, besides technical information becomes an important aspect of community forestry programme. As Shrestha (1987) reports while people were convinced of the need for afforestation, they lacked information about new government policies and legislation on *Panchayat* forests and *Panchayat* protected forests. In the study area also, most of the sampled respondents were found to be unaware of government policies and new laws (Forestry Act - 1993, for example) related to forestry. This situation has also been confirmed by the small group discussion as well as informal interviews held with village people. Such a situation cannot be considered as desirable in the context of participation, in considering the report of Arnold and Campbell (1985). These authors state that lack of widespread

public knowledge of the details of managing a Panchayat protected forests was the greatest barrier to community participation during the project's early stage.

Rangers, Assistant Rangers and Forest Guards are government personnel who play the extension role at the village level. Similarly, major extension media at the national level include radio programmes, articles, bulletin, leaflets and special publications on community forestry. Extension media are important sources of information for they seek to inform people about the development activities. In view of the importance of these media, the respondents were asked to indicate the sources they preferred for seeking information on community forestry and forestry related matters. Table 15 displays the distribution of respondents on the basis of their preference to a particular source of information to others.

It is evident from Table 15 that slightly more than three-fourth (78.5 percent) of the respondents seemed to have preferred radio programme on forestry to printed matters. It seems logical for the rural people, majority of whom lacked formal education, to have chosen the radio broadcasting for seeking information. Readily unavailability of printed matters in rural areas was another reason for abandoning these media. Likewise, about three-fourths of them chose Rangers or Assistant Rangers in preference to Forest Guard as channel to seek information. Relatively more credibility as well as more resourcefulness on the part of Rangers were the basis on which the respondents preferred these extension agents.



**Table 15**  
**Distribution of Respondents by their Preference**  
**for Extension Media/Channel (N = 200)**

Extension Media/ Channel	Number	Percent
<b>Mass Media</b>		
(a) Radio Programme	157	78.5
(b) Printed Materials	43	21.5
<b>Total</b>	<b>200</b>	<b>100.0</b>
<b>Extension Agents</b>		
(a) Rangers/ Asst. Rangers	149	74.5
(b) Forest Guards	51	25.5
<b>Total</b>	<b>200</b>	<b>100.0</b>

Of the total respondents, 58 percent reported that they had been listening to radio programmes on forestry, while the remaining 42 percent never did so. Among those who used to listen, only about one-fifth of them were aware of the exact days and time of broadcast. About one-fifth (21.5 percent) of the respondents reported that they read printed material such as leaflets, pamphlets, bulletins and magazines. The respondents who were not even aware of the fact that such publications do exist constituted 66 percent, although they mentioned the existence of some pictorial printed materials like posters.

Training is an important component of the development process. It facilitates development by increasing awareness, improving skills and bringing



about a change in attitude. Iles (1987) states that village level training stimulates local participation in development programmes. Similar is the view of Brathwaite and Hodge (1987) who assert that community participatory programmes are usually unsuccessful because citizens receive inadequate training. Considering the importance of training to community people, the respondents were also asked to indicate whether or not they had undergone any training programmes related to forest management. Their response to this query indicated that only a few (7 percent) of them were found to have received practical training. The duration of such training period varied from a minimum of one day to as many as 12 days. There were very few (3.50 percent) respondents who have had the opportunity to participate in organized tours. When asked if they were willing to receive trainings, a significant majority (91.50 percent) of the respondents felt a need for such trainings. The major areas of training indicated, in order of priority, by the respondents included: nursery techniques, silvicultural operations, and growing multi-purpose tree species.

### **Situational Factors and Forest Management**

The circumstances in a particular setting often pose a constrain in the way of participation. Keeping this in view, the situational factor was also addressed in terms of physical setting, the situation of forest in the study area, people's experience with development intervention and the extent of overall satisfaction derived from the programme.

## Physical Setting

Cabanilla (1989) suggests that the social forestry site must be examined with emphasis on the place of man in the physical geography. The physical setting variable, in this study, was assessed by directing questions to the respondents concerning their feeling regarding the convenience of topographical condition in their respective areas for participation in the community forestry activities. Table 16 presents the respondents' feeling about the suitability of the terrain including the distance to be traveled in an attempt to involve themselves in the programme activities.

**Table 16**  
**Distribution of Respondents Reporting about Suitability**  
**of the Physical Setting (N = 200)**

Physical Setting	Number	Percent
Highly Favourable	67	33.5
Favourable	83	41.5
Unfavourable	50	25.0
Total	200	100.0

The data reveal that the physical setting was most favourable to only about one-third (33.5 percent) of the respondents. To a good number (41.4 percent) of respondents, the condition was still favourable and one-fourth (25 percent) of them described the situation as if they were experiencing discomforts, especially endured by the rain during monsoon. Though small, this portion of respondents demanded that the venue for group meetings and

nursery sites be fixed at places where wider participation of users could be obtained. It was noticed during the field observation also that the convener in one of the FUG meetings had the meeting commenced three hours later than it was scheduled. This happened mainly because the venue for the meeting in the hill area was not conveniently located for most members of FUGs. This implies that it is tempting for the forest users to look for a venue and time convenient to most of the people for their active involvement in CFDP activities, as far as possible.

### **Situation of Forests Surrounding Users**

As has been mentioned earlier, the forest vegetation covers about 46 percent of the total geographical area in Dhading District. However, the nature and condition of the forests all over the district was not the same. The condition of forests, to which the users were affiliated, was ascertained by the respondents on the basis of their observation and experience in their respective areas. A great majority (87 percent) of the respondents reported that the forests were in a miserable condition just a few years ago. It was learnt that only after the local inhabitants came into action in managing these forests, the situation gradually started improving. This fact also became conspicuous through a small group discussion held among the rural dwellers on the issue of forest situation. They also had a story to tell about the crisis of forest products even for household uses owing to haphazard exploitation and mismanagement of forest resources before the advent of the current community forestry programme. The reasons for the forests getting thicker and thicker over time was attributed mainly to the self-consciousness as well as self-cautiousness on

the part of the villagers themselves in the matters of management and utilization of the forest products.

Even after introduction of the current community forestry programme, people in the community were still making complaints about the illegal public encroachment in the community forests. During the course of the field survey, it could not remain out of sight of the researcher that some people were returning from the forests with back-loads of fuelwood and tree-fodder. It is also interesting to note that some (23 percent) of the respondents reported that they never realized a scarcity of forest products for their consumption. They had, rather, been experiencing improvement in the forest situation. The main reasons explained by them for improved forest condition was that this group of people had either dense forest to their access or they lived in close proximity to the forests.

The implications of the above findings are that there is a need for maintaining a balance of man-forest land ratio, and developing consciousness among people with regard to management and utilization of forest resources judiciously.

### **Forest Users' Experience with Development Intervention**

Most government interventions do not take place in a vacuum. They intend to bring changes in the activities, thus affecting people. Viewed from this perspective, the process of development intervention will usually alter the circumstances of a greater or lesser segment of the population. Although, one hopes that the development interventions would always generate beneficial changes to one's effect, yet during the process it so happens that the population

affected by such interventions usually contain both winners as well as losers. One such example in the context of Nepal's forestry sector is the Forest Preservation Act - 1967, which affected only the weaker section of the society adversely. Those powerful individuals involved in offenses escaped through influence and manipulation. Thus, Cohen and Uphoff (1977) maintain that the experience which people have had with government interventions or with foreign-aided programmes, whether good or bad or indifferent, will affect their willingness to participate in a new undertaking. Taking this line of thought into consideration, it was deemed crucial to understand the respondents' perception about the introduction of present CFDP in the light of the past events they have experienced. The present study examined the degree of optimistic or pessimistic feeling that the respondents had towards the current CFDP. Table 17 illustrates the distribution of scores that respondents obtained on the degree of optimism.

**Table 17**  
**Distribution of Respondents by Scores on Experience**  
**with Development Intervention (N = 200)**

Scores	Number	Percent
14 to below 17	35	17.5
17 to below 21	123	61.5
21 to 24	42	21.0
Total	200	100.0

Mean = 18.63; SD = 2.23



The data presented in Table 17 reveal that all the respondents scored higher than 12 points. On the basis of these scores, the evidence is enough to interpret that all the members of FUG sampled for the study were quite optimistic, though with varying degree, of the CFDP being introduced. This finding appears to be converse of the statement 'dependence on and hostility towards government authority' advocated by Rogers (1969) as one of the subcultures of the peasantry. However, the impression that 'development projects intend to fulfill more of their official formalities rather than making efforts towards fulfilling the needs of the intended beneficiaries' remained still prevalent among the rural populace. This is an indication of a sceptical attitude of the respondents. This has been demonstrated by the respondents' response to this very statement out of a total of six retained in the final scale. The respondents who agreed to this statement accounted for 72.5 percent. Therefore, a note of warning should still be sounded here, despite overall optimistic characteristics of the respondents.

This finding implies that rural communities, in general, have reverence for CFDP, an attitude favourable for their participation. Nevertheless, they were not totally free from a feeling of mistrust towards the implementing agency. The positive attitude of the forest users alone cannot be treated as a sufficient condition to accomplish the set objectives of the CFDP. It may, therefore, be cautioned that while the intervention by the government is a desirable action in the context of present community forestry programme, care is also needed in incorporating the precise type of government control into the policy framework that would produce beneficial changes to the effects of all the actors involved. In other words, any attempt by the government to



intervene in rural development programmes like the community forestry programme should make so, keeping in view the opinion of target beneficiaries about informational as well as technological innovations together with its likelihood consequences. This requires an understanding of the beneficiaries' views and their knowledge *a priori* so that the intention of intervention is perceived by both the parties (implementers and recipients) as one and the same thing, a situation that is congenial to either party, *ceteris paribus*.

### **Forest Users' Satisfaction with CFDP**

The sources of satisfaction with developmental programme is linked not only to the actual fact of accruing some material and non-material benefits to the members of a social system. After all, the ultimate essence of participation in development is to be measured by the extent of satisfaction it generates among the participants. To be more explicit and specific about CFDP, the fringe benefits a participant receives can form only a partial contentment on his or her part. It does not include greater pace of development of forest resources in order to create an atmosphere congenial for raising the living standard of the rural populace as a whole. From this standpoint, the respondents' level of overall satisfaction as a result of their participation in the CFDP activities was evaluated. For this the respondents were asked to indicate their level of satisfaction with the overall performance as well as the progress of the CFDP.

Of the total respondents, although the majority (60.5 percent) of them expressed a sense of satisfaction, yet a good number (39.5 percent) of them were not fully satisfied. The respondents who were not satisfied attributed their dissatisfaction to the following: (1) discrimination in the matter of benefit

distribution, (2) failure on the part of the FUG to seek opinions of those who were considered to be at the bottom of the social structure while making decisions, (3) use of some members of FUG mere as physical laborers, (4) failure on the part of the FUC to foster group feeling among FUG members, (5) administrative delay in handing over of forest land to users, (6) domination of a few so-called influential in the FUG and (7) passivity of FUC in obtaining public support and dealing with forestry personnel. One of the implications of the above attributes is that the members of FUC need to play more distinct popular leadership roles that is instrumental in ensuring such aspects as group cohesive, a sense of belonging, equity, morality and networking between FUG and implementing agency. It also suggests a need for the concerned agency to further accelerate the handing over process in the light of demands of users within the frame of the new forest policy.

Given the contextual background discussed in this chapter, the extent of participation of members of FUG will be examined in the chapter to follow.

To summarize, the current community forestry programme was perceived by the forest users as being more people-centered both at policy as well as project level, hence superior to the earlier one under the banner of Panchayat Forests and Panchayat Protected Forests. A larger proportion of respondents were still dependent on the forest products to meet their basic tree product needs. The proportion of respondents utilizing tree products for their household as well as farm purposes ranged from 75 percent to 99.5 percent. The national forest and community forest were the main sources of procurement. More women than men were involved in the procurement of tree products. However, women were under-represented in CFDP as such. Their

proportion in FUG and FUC accounted for 12 percent and 11 percent respectively.

Handing over of forests from the government to the FUGs was considered by the local residents as crucial from legal security grounds. More than one-half (57.5 percent) of the respondents felt government's administrative and technical support to their FUGs as inadequate, while 42.5 percent of them perceived as sufficient. The respondents also perceived devolution of legal authority by the DFO to the FUGs as very crucial to carry out the forest management activities independently. Besides, empowering the members of FUG in terms of providing opportunity to participate was also perceived as a need at individual level.

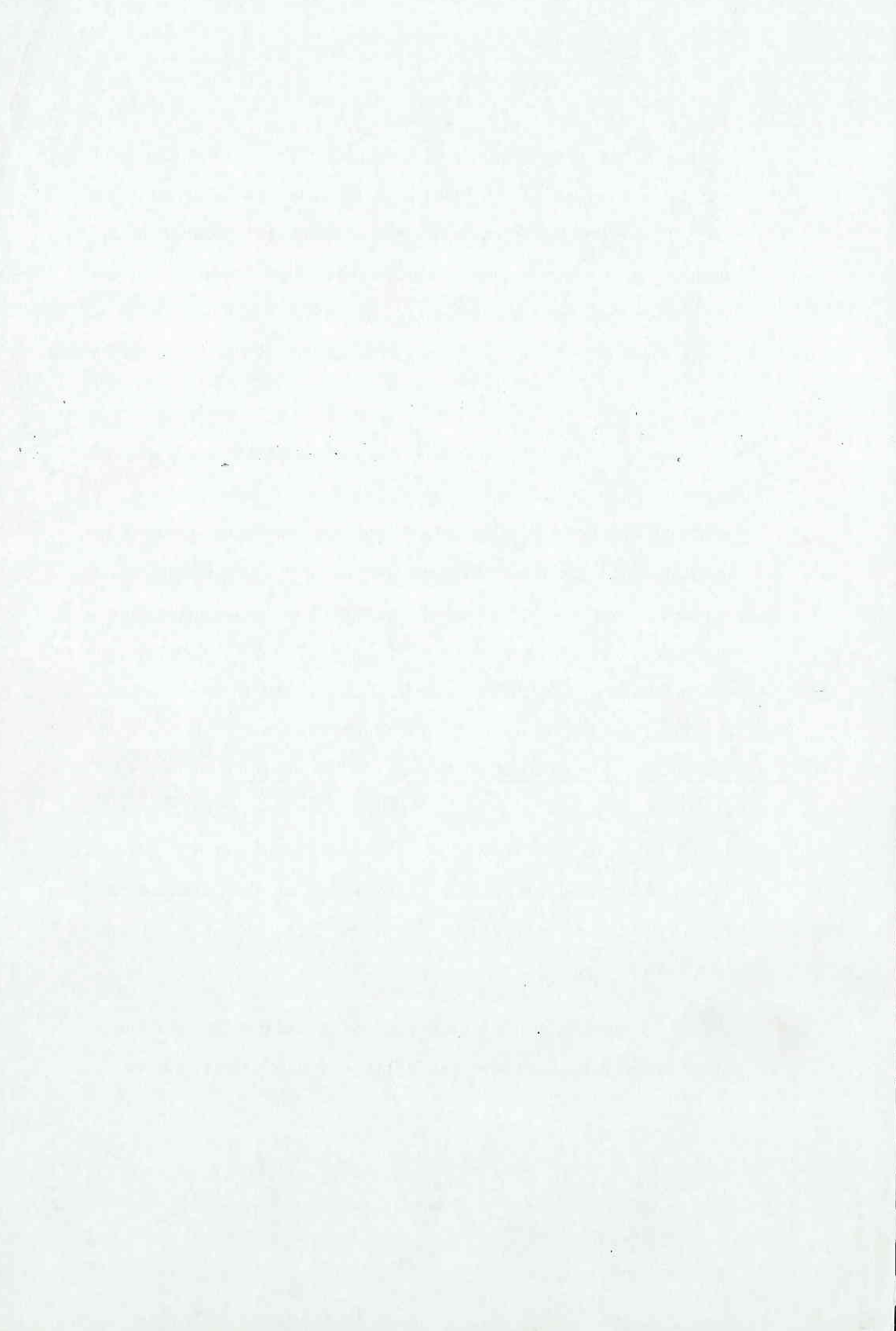
The ideal structural elements for an FUG preferred by a significant majority of the respondents included (1) 'general assembly' kind of decision-making structure, (2) 80 to 100 members and (3) more formal mode. The respondents' view did not differ in terms of undertaking just one or more than one projects concurrently so as to call their FUGs more productive. By having these structural elements, the forest users meant that their FUGs would be able to act together more effectively.

A majority of the respondents had strong linkage with their peers (64.5 percent) as well as the executive members of FUC (58.5 percent). Conversely, their linkage with government officials was weak. Among mass media, the radio programme as a source of information was preferred by a large majority (78.5 percent) of the respondents to the printed materials. The radio programme on forestry was also listened to by 58 percent of them, while a

small proportion (21.5 percent) read printed materials. A great majority of respondents also indicated a need for training programme on forestry, as only a few of them ever had undergone practical trainings. Extension system also appeared as an important aspect, because most of the forest users were not aware of even the recent Act, that is, Forest Act-1993. Nearly three-fourths of the respondents preferred the Rangers and Assistant Rangers as extension agents.

One-fourth of the respondents felt the topographical and weather condition unfavourable for them to participate in CFDP activities, although it was favourable to the remaining three-fourth. As observed and perceived by the respondents, the forest which was once in a miserable condition was improving over time with the advent of present community forestry programme. All the respondents were quite optimistic of the current community forestry programme, despite the bad impression of the previous one they had. On the whole, the FUG members were satisfied with the programme, although about 40 percent of them were not fully satisfied. Discrimination in the benefit distribution, slow handing over process of forests, failure of FUG to include people from all the sections of society in decision-making matters, domination of FUG by a few so-called influential and passivity on the part of the FUC to play its ascribed roles could be associated with dissatisfaction.

Within the contexts discussed above, the extent of participation would be examined along the variables selected for the study in the chapter to follow.



## **CHAPTER VI**

### **PARTICIPATION IN COMMUNITY FORESTRY**

This chapter highlights the extent of participation of members of FUG in three major activities of community forest management, namely, decision-making, implementation and benefit sharing. The extent of participation in all these activities are described in terms of three levels: low, medium and high. This was done due to variations among the members of FUG in terms of their participation in the activities of community forestry programme. The results of analysis of participation would indicate the general tendency in terms of 'who' among a heterogeneous mass of forest users, participate in 'what' activities of CFDP, to 'what extent'. The last section explains 'how' participation is occurring in a given context.

While scales and indexes developed for the purpose of the study were utilized to measure the level of participation, categorization of respondents along variables was done on the basis of value of standard deviation and mean scores.

#### **Extent of Participation**

For measuring the extent of participation in decision-making, the respondents were asked to express the frequency of their participation in the meetings conducted for making decisions and planning on matters related to community forestry.



Table 18 presents the summary of the cross-tabular examination of respondents' extent of participation in decision-making, implementation and benefit sharing activities.

**Table 18**  
**Distribution of Respondents by Extent of Participation**  
**in CFDP Activities (N = 200)**

Activities	Level of Participation			
	Low	Medium	High	Total
Decision-making	44 (22.0)	109 (54.5)	47 (23.5)	200 (100.0)
Implementation	45 (22.5)	95 (47.5)	60 (30.0)	200 (100.0)
Benefit Sharing	41 (20.5)	117 (58.5)	42 (21.0)	200 (100.0)

Note: The figures in the parenthesis indicate percentage of the total respondents for each activity of CFDP.

The above table indicates that a larger proportion of respondents were concentrated only at the medium level, rather than at either low or high level of participation in all the three activities. The proportion of such respondents ranged from 47.5 percent in the case of implementation to 58.5 percent in benefit sharing. Also evident from the same table is that only a minority of them were at high level of participation in all the three activities. Of the high levels of participation in three CFDP activities, 30 percent was the largest proportion of respondents found in the implementation activity. On the other

hand, of the low levels of participation, the smallest proportion of respondents (20.5 percent) was in the case of benefit sharing.

This finding reflects the fact that, over all, only a small portion of the local residents was found to be involved more actively in all the activities. In other words, the members of FUGs cannot be considered as having involved very actively in CFDP activities. It can, therefore, be deduced that the human resources had not been mobilized to the fullest extent to manage the forest resources. Thus, the findings clearly imply a need for countervailing forest and human resources for their sustainability on a long term basis.

The following section presents additional analysis of participation in relation to respondents' personal characteristics, institutional arrangement, structural elements of FUG, interactional arrangement and situational aspects.

### **Personal Characteristics and Participation**

It is apparent from the profile of respondents described in Chapter Four that the members of the FUGs do not form a homogeneous mass in terms of their personal attributes. This section explains the extent of participation in relation to the personal traits.

#### **Age and Participation**

The present sample of respondents constituted of only adults, whose age ranged from 17 to 70 years. For the purpose of this analysis the original age categories of adult members of FUGs were recoded into two broad categories, that is, young and old age groups. According to this classification, the

respondents who were of 17 to 36 years of age were put under the 'young age group' and those above 36 years under 'old age group'.

**Table 19**  
**Level of Participation by Age Groups (N = 200)**

Activities	Level of Participation	Age Groups (%)		N
		Young	Old	
Decision-making	Low	23.5	19.7	44
	Medium	55.5	53.1	109
	High	21.0	27.2	47
	Total	100.0	100.0	200
Implementation	Low	16.3	29.6	45
	Medium	51.8	43.2	95
	High	31.9	27.2	60
	Total	100.0	100.0	200
Benefit Sharing	Low	23.5	18.5	41
	Medium	56.8	59.7	117
	High	19.7	21.8	42
	Total	100.0	100.0	200

Table 19 illustrates that the largest proportion of respondents from either of the age groups were found to be concentrated at medium level of participation in all the three activities. Further review of the same table reveals that the proportion of older respondents was found to be greater in decision-

making and benefit sharing activities (27.2 and 21.8 percent respectively) in comparison to younger ones (21 and 19.7 percent). However, the extent of participation of older respondents was found to be the other way round in the case of implementation stage. In this case, at high level of participation, the proportion of younger respondents was larger than those of older ones.

The above findings, by and large, reflect the fact that irrespective of age groups, a majority of the respondents were found to be moderately involved in CFDP activities. Only a small proportion of them were found to be relatively more active than others, as about 32 percent was the largest proportion found at high level of participation. Age group-wise, older respondents were found to be more active in decision-making and benefit sharing activities, while the younger ones were found to be so at implementation.

The findings seem to be reasonable when looked from the point of view of the type input contributed by the respondents. It might be that while older members of FUGs participated more actively in planning the activities which involved brain-storming, the younger forest users remained more active at implementation stage that required physical exercise.

### **Ethnicity and Participation**

Ethnicity as a social category exists in the rural social system of Nepal. Some of the FUGs included in the study were relatively homogeneous, while others were heterogeneous in terms of ethnic composition. It was assumed that the persistence of such a homogeneity or heterogeneity in a group situation would reinforce differential behaviour among ethnic groups in terms of their extent of willingness to cooperate within the group itself. With this

consideration in mind, the level of participation of respondents in the CFDP activities was examined.

As mentioned earlier, the Tamangs formed the largest single ethnic group (21.5 percent) in the district. However, the distribution of respondents in the sample on the basis of their ethnicity varied from their proportion in the district. Eventhough Tamangs did not form a majority in the sample, yet the entire sample respondents were divided into two broad categories that is, Tamang and non-Tamang for the purpose of analysis of the level of participation of these ethnic groups in CFDP activities.

As shown in Table 20, Tamangs were found to be more actively participating in CFDP activities, as compared to their counterparts. The proportion of Tamangs at high level of participation in decision-making, implementation and benefit sharing activities was larger than that of non-Tamangs. On the other hand, a larger proportion of the respondents coming from non-Tamang group were moderately involved in all the three activities.

Thus, relatively more active involvement on the part of a particular ethnic group can be attributed to a tendency to cohere to tackle a specific situation that is likely to affect their lives. Another possible explanation could be that as a particular social group played an active role, while other groups lacked creativity or willingness to do so in the same spirit. Disparity in the extent of participation might also be due to coherency among certain interest groups through community ties or kinship with an attitude to cooperate with specific development tasks, while others dispersed instead, due to difference in opinion.

**Table 20**  
**Level of Participation by Ethnicity (N = 200)**

Activities	Level of Participation	Ethnicity (%)		N
		Tamang	Non-Tamang	
Decision-making	Low	13.1	25.7	44
	Medium	33.3	58.7	109
	High	53.6	15.6	47
	Total	100.0	100.0	200
Implementation	Low	6.1	25.7	45
	Medium	26.1	55.7	95
	High	67.8	18.6	60
	Total	100.0	100.0	200
Benefit Sharing	Low	10.0	24.6	41
	Medium	35.5	61.1	117
	High	54.5	14.3	42
	Total	100.0	100.0	200

### **Residential Status and Participation**

Table 21 provides the cross-tabular examination of the respondents' participation in relation to their residential status. The analysis showed that there was a larger proportion of original residents at high level of participation in all the activities, as compared to migrants. However, they did not form the majority of the total respondents, as their largest proportion at high level of



participation ranged from 25.2 percent in benefit sharing to 34.8 percent in implementation.

The largest proportion of the respondents were found to have medium level of participation in all the three activities, irrespective of residential status. The proportion of these respondents ranged from 43.8 to 64.4 percent, that is, higher than the proportion of respondents found at high and low levels.

Table 21

Level of Participation by Residential Status (N = 200)

Activities	Level of Participation	Residential Status (%)		N
		Original Resident	Migrant	
Decision-making	Low	22.6	20.0	44
	Medium	51.6	64.4	109
	High	25.8	15.6	47
	Total	100.0	100.0	200
Implementation	Low	21.3	26.7	45
	Medium	43.9	60.0	95
	High	34.8	13.3	60
	Total	100.0	100.0	200
Benefit Sharing	Low	17.4	31.1	41
	Medium	57.4	62.2	117
	High	25.2	6.7	42
	Total	100.0	100.0	200

The findings indicate that, in comparison to the migrant respondents, the original residents were more active participants. Relatively greater attachment and reverence on the part of original residents for the forests, which they have been managing since long ago, might be one of the reasons for their higher contribution towards community forest management.

### **Family Structure and Participation**

For assessing the level of participation in relation to family structure, the original three family types, that is, nuclear, joint and extended, have been re-grouped into two new categories as 'mono-family' and 'multi-family'. In order to form the multi-family category, the respondents that came from joint as well as extended families were collapsed into one, while nuclear family was renamed as mono-family. This was done in view of small proportion (10 percent) of respondents belonging to extended family, assuming that the inferences drawn from such a small proportion might not be that meaningful. It was hypothesized that a respondent coming from a household made up of only one family consisting of husband, wife and their children might behave differently from that of a respondent representing a household with more than one such families living together. It can be expected that the intensity of participation of an FUG member from multi-family would be higher than one from mono-family.

It is evident from the data presented in Table 22 that the largest proportion of respondents coming from both the family types were moderately involved in all the three activities. The same table also depicts that the greater proportion of representation at high level of participation in all the three

activities were from multi-family. This means that the respondents coming from mono-family group had lower level of participation in all the three activities, as compared to respondents coming from multi-family.

**Table 22**  
**Level of Participation by Family Structure (N = 200)**

Activities	Level of Participation	Family Structure (%)		N
		Mono-family	Multi-family	
Decision-making	Low	26.2	17.5	44
	Medium	54.4	54.7	109
	High	19.4	27.8	47
	Total	100.0	100.0	200
Implementation	Low	26.2	18.6	45
	Medium	44.7	50.5	95
	High	29.1	30.9	60
	Total	100.0	100.0	200
Benefit Sharing	Low	25.2	15.5	41
	Medium	57.3	59.8	117
	High	17.5	24.7	42
	Total	100.0	100.0	200

On the whole the findings also seem logical as a joint or extended family is likely to have relatively more members and therefore has more people to spare to participate in CFDP activities more regularly and intensively.

### Literacy Status and Participation

The literate respondents included in this analysis were those who had some years of formal schooling, and those labeled as illiterate were without any schooling. It is evident from Table 23 that in terms of literacy status, a larger proportion of literate respondents were found to be at high level of

**Table 23**

#### Level of Participation by Literacy Status (N = 200)

Activities	Level of Participation	Literacy Status (%)		N
		Literate	Illiterate	
Decision-making	Low	20.9	24.2	44
	Medium	53.7	56.1	109
	High	25.4	19.7	47
	Total	100.0	100.0	200
Implementation	Low	22.4	22.7	45
	Medium	44.8	53.0	95
	High	32.8	24.3	60
	Total	100.0	100.0	200
Benefit Sharing	Low	20.8	20.3	41
	Medium	64.9	54.5	117
	High	14.3	25.2	42
	Total	100.0	100.0	200

participation in the case of decision-making and implementation activities. However, the proportion of illiterate respondents was found to be greater at high level of participation in benefit sharing.

Analysis of the data indicated that the largest proportion (a majority) of respondents irrespective of their literacy status was found moderately involved in CFDP activities. The literate respondents appeared to have participated more actively than those of their illiterate peers except for the benefit sharing activity, in which the latter category of respondents had a greater extent of involvement.

### **Occupational Status and Participation**

The level of participation among respondents with and without secondary occupation was examined and the data relating to this are presented in Table 24.

Among all the respondents, irrespective of their occupational status, the largest proportion of them were involved in all the activities of CFDP with medium strength. However, they had differential proportion at high and low level of participation.

Over all, the respondents without secondary occupation had a larger proportion at high level of participation in all the three activities, as opposed to those with secondary occupation. This has been substantiated by the fact that the proportion of respondents without secondary occupation at high level of participation ranged from 22.7 in benefit sharing to 31.4 percent in implementation activity. On the other hand, the proportion of respondents

having secondary occupation at high level of participation ranged from as low as 10 percent in the case of decision-making to as high as 26.7 percent in the case of implementation.

**Table 24****Level of Participation by Occupational Status (N = 200)**

Activities	Level of Participation	Occupational Status (%)		N
		With Secondary Occupation	Without Second. Occ.	
Decision-making	Low	35.0	16.4	44
	Medium	55.0	54.3	109
	High	10.0	29.3	47
	Total	100.0	100.0	200
Implementation	Low	28.3	20.0	45
	Medium	45.0	48.6	95
	High	26.7	31.4	60
	Total	100.0	100.0	200
Benefit Sharing	Low	30.0	16.6	41
	Medium	53.3	60.6	117
	High	16.7	22.7	42
	Total	100.0	100.0	200

The analysis indicated that the respondents with single occupation were found to have participated more intensively in the CFDP activities compared to



those having secondary occupation. One possible explanation for the more active involvement of the respondents without secondary occupation could be that they had more spare time to involve themselves. On the other hand, the reason for lower level of participation by the respondents with secondary occupation could be that their involvement in other occupational activities did deter them to be as active as their counterparts with single occupation.

### **Family Income and Participation**

In assessing the extent of participation in relation to the level of family income, the analysis revealed that the individuals who were relatively well-off had higher intensity of participation in decision-making and benefit sharing (Table 25). But the reverse was the case with implementation activity, where respondents with poor financial background were involved with higher intensity.

Further review of the same table reveals that, by and large, irrespective of their income status, the respondents had medium level of participation in all the three activities.

The results indicate that the members of FUGs coming from three different income groups differed among themselves in terms of the level of participation in various activities of CFDP. The presence of a larger proportion of relatively well-to-do FUG members, at high level of participation in decision-making, might be because these people played influential roles in making decisions and planning programmes by virtue of their higher economic status. At the same time, they were also found to have enjoyed more benefits in comparison to the poorer section of the society. On the other

**Table 25**  
**Level of Participation by Family Income (N = 200)**

Activities	Level of Participation	Level of Income (%)			N
		Low	Medium	High	
Decision-making	Low	21.0	24.6	20.0	44
	Medium	54.8	55.7	46.7	109
	High	24.2	19.7	33.3	47
	Total	100.0	100.0	100.0	200
Implementation	Low	25.0	14.8	33.3	45
	Medium	39.5	63.9	46.7	95
	High	35.5	21.3	20.0	60
	Total	100.0	100.0	100.0	200
Benefit Sharing	Low	24.2	16.4	6.7	41
	Medium	60.8	68.8	66.0	117
	High	15.0	14.8	27.3	42
	Total	100.0	100.0	100.0	200

hand, the larger percentage of FUG members with low income group at high level of participation in implementation might be that they were prompted by their poor economic condition with the expectation of getting more benefits. Another possibility is that the poor, who could not manage to participate actively in other activities, might have contributed more labour and material (non-recurring) in afforestation, silvicultural and nursery management activities.

### **Organizational Membership and Participation**

Membership in other social organizations is likely to contribute to an individuals' knowledge regarding development activities. In the study villages, the other formal and informal local organizations that existed were Livestock Production Group, Drinking Water Group, Irrigation Water Group, Health Club, Cooperatives, Village Development Committee, Non-formal Education Group and Ethnic Association.

As is evident from Table 26, the proportion of the respondents, with membership in other organizations, at high level of participation ranged from Group percent in benefit sharing to 44.2 percent in decision-making. Among those without membership, 24.8 percent was the largest proportion at high level of participation. Over all, the respondents with pluralistic membership in organizations was found to have higher level of participation as compared to those who did not have such membership. Nonetheless, the extent of participation of a larger proportion of respondents was moderate.

The findings seem to reflect a behaviour of those village people who do acknowledge the value of participation in local organizations. Possibly, this behaviour in turn might have motivated them towards participation in other organizations as well.

**Table 26**  
**Level of Participation by Organizational Membership**  
**(N = 200)**

Activities	Level of Participation	Membership Status (%)		N
		Member	Non-member	
Decision-making	Low	7.0	26.1	44
	Medium	48.8	56.1	109
	High	44.2	17.8	47
	Total	100.0	100.0	200
Implementation	Low	9.3	26.1	45
	Medium	41.9	49.1	95
	High	48.8	24.8	60
	Total	100.0	100.0	200
Benefit Sharing	Low	9.3	23.6	41
	Medium	55.8	59.2	117
	High	34.9	17.2	42
	Total	100.0	100.0	200

### Structural Elements of FUG and Participation

The ways in which FUGs are structured internally; their mode of formalness, the interaction among the members and between the higher-ups and ordinary members within FUGs, and their nature of tie with the implementing agency and extent of its assistance to FUGs, could have some

sort of bearing on the extent of participation. With this consideration, the extent of participation in relation to these organizational attributes of FUGs have been explored.

### **Mode of Formalness and Participation**

The significance of formalization of FUG, as pointed out by the respondents, has already been stated in Chapter Five. Analysis of respondents' extent of participation with respect to mode of formalization of their FUGs shows that the proportion of respondents from more formalized groups was much greater at high level of participation, as opposed to those from less formalized groups (Table 27). The proportion of respondents representing more formal FUGs at high level of participation ranged from 22.6 percent in benefit sharing to 32.1 percent in implementation. On the other hand, the largest proportion of respondents coming from less formal FUGs, at high level of participation, ranged from 9.8 percent in decision-making to 14.7 percent in the case of benefit sharing. Nevertheless, a larger proportion (ranged from 42.7 to 70.7 percent) of the respondents, irrespective of whether they represented more formal or less formal FUGs, were found to have medium level of participation.

During the group discussions also, the local people in study area pointed out that there had been administrative delays on the part of the government agency in granting FUGs with a formal status. They also realized that such delays caused the members of FUGs, which were yet to be registered with the DFO, reluctant to participation in CFDP activities.

**Table 27**  
**Level of Participation by Mode of Formalness of FUG**  
**(N = 200)**

Activities	Level of Participation	Mode of Formalness (%)		N
		Less formal	More formal	
Decision-making	Low	19.5	22.6	44
	Medium	70.7	50.3	109
	High	9.8	27.1	47
	Total	100.0	100.0	200
Implementation	Low	12.1	25.2	45
	Medium	65.9	42.7	95
	High	22.0	32.1	60
	Total	100.0	100.0	200
Benefit Sharing	Low	26.8	18.9	41
	Medium	58.5	58.5	117
	High	14.7	22.6	42
	Total	100.0	100.0	200

The findings, indicating greater intensity of participation of those respondents coming from more formal FUGs together with their own preference for a more formalized organization, imply a need for recognition of the FUGs by the concerned agency for becoming these groups formal organizations. It appears that a still greater extent of participation could be achieved, provided that the process of registration of FUGs is further



accelerated. On the other hand, to get their FUGs duly registered with the DFO should be a continuous effort on the part of the forest users in order for them to achieve a formal status.

### **Handing over of Forest Land and Participation**

The more one feels secured in terms of control over resources, the more would be the likelihood of his or her participation in rural development programmes such as community forestry. This statement has been supported by the fact that greater proportion of the respondents, to whose FUGs forest land has been handed over, had a high level of participation in all the activities. Conversely, the proportion of respondents, without forests being handed over to their FUGs, was smaller at high level of participation.

Table 28 shows a larger proportion (ranging from 36.6 to 43.9 percent) of respondents coming from FUGs with forests already handed over at high level of participation. On the other hand, the proportion of respondents coming from FUGs to which forest land has yet to be handed over, ranged from 17 to 26.4 percent at high level of participation. However, in terms of intensity of participation, neither of these categories formed the single largest proportion of the total. It could be observed that the largest proportion of respondents were involved in the forest management with medium level of participation.

The above finding on pattern of respondents' participation manifests itself a need for the handing over of forest land to the FUGs in attempting to bring a shift of a larger proportion of forest users from lower to a much higher level of participation in CFDP activities.

Table 28

**Level of Participation by Handing over Status  
of Community Forests (N = 200)**

Activities	Level of Participation	Hand-over Status (%)		N
		No	Yes	
Decision-making	Low	21.4	24.4	44
	Medium	58.5	39.0	109
	High	20.1	36.6	47
	Total	100.0	100.0	200
Implementation	Low	22.7	22.0	45
	Medium	50.9	34.1	95
	High	26.4	43.9	60
	Total	100.0	100.0	200
Benefit Sharing	Low	25.1	6.4	41
	Medium	57.9	57.0	117
	High	17.0	36.6	42
	Total	100.0	100.0	200

**Awareness of Group Activities and Participation**

Awareness is one of the essential conditions for people's participation in development activities. The consequence of awareness is that it tends to push the individuals towards bringing change in themselves and such a change facilitates involvement in development programmes.

From the data presented in Table 29, a distinct linear trend of respondents' participation could be established on the basis of their extent of involvement. This trend indicates that the higher the awareness, the greater the extent of participation. This can be illustrated by the proportionate involvement of the respondents at high level of participation in all the activities.

**Table 29**  
**Level of Participation by Awareness of Group Activities**  
**(N = 200)**

Activities	Level of Participation	Extent of Awareness (%)			N
		Low	Medium	High	
Decision-making	Low	2.8	24.1	5.8	44
	Medium	50.0	67.5	42.0	109
	High	7.2	8.4	52.2	47
	Total	100.0	100.0	100.0	200
Implementation	Low	31.3	26.5	11.6	45
	Medium	60.4	48.2	37.7	95
	High	8.3	25.3	50.7	60
	Total	100.0	100.0	100.0	200
Benefit Sharing	Low	27.1	24.1	11.6	41
	Medium	66.7	55.4	56.5	117
	High	6.2	20.5	31.9	42
	Total	100.0	100.0	100.0	200

At high level of participation, the proportion of the respondents with greater extent of awareness ranged from about 32 percent in the case of benefit sharing to little more than one-half percent in decision-making as well as implementation activities. In contrast, the respondents who were relatively less aware had only a small proportion (from 6.2 to 8.3 percent) of their representation at high level of participation. It is also patent from the table that the respondents involved moderately in all the activities formed the largest proportion as compared to those found at either high or low level.

Participation requires that the beneficiaries concerned be well informed about the programme activities, if higher extent of participation is to be expected. It was also noticed during field study that most forest users were not aware of enactment of the new forest Act. Hence, the results of the study implies that there is a need for creating awareness among the members of the FUG about their group activities for obtaining higher level of involvement.

### **Interactional Arrangement and Participation**

Awareness of development programmes is a necessary, but not a sufficient condition for participation. Information and knowledge regarding the development plans and policies of implementing agencies both at local and higher level are equally important. The important sources of information and knowledge regarding matters related to CFDP are the peer groups, higher ups in an organizational structure of FUG as well as the staffs of the implementing agency. Table 30 presents the level of participation of respondents in relation to their contacts with their members of FUC, FUG, and DFO staff.

Table 30

**Level of Participation by Linkage with FUC Members,  
FUG members and Government Personnel (N = 200)**

Activities	Level of Participation	Strength of Linkage (%)		N
		Weak	Strong	
Decision-making	Low	(41.0) [40.9] {36.1}	(8.5) [11.6] {8.7}	44
	Medium	(53.0) [53.5] {49.5}	(55.6) [55.0] {59.2}	109
	High	(6.0) [5.6] {14.4}	(35.9) [33.4] {32.1}	47
Implementation	Low	(36.1) [39.4] {35.0}	(12.8) [13.2] {10.7}	45
	Medium	(49.4) [46.5] {47.5}	(46.2) [48.1] {47.6}	95
	High	(14.5) [14.1] {17.5}	(41.0) [38.7] {41.7}	60
Benefit Sharing	Low	(33.8) [26.8] {25.8}	(11.1) [17.1] {15.5}	41
	Medium	(56.6) [62.0] {61.8}	(59.8) [56.6] {55.3}	117
	High	(9.6) [11.2] {12.4}	(29.1) [26.3] {29.2}	42

Note: The figures in each set (of three) from top to bottom refer to FUG-FUG, FUC-FUG and government-FUG linkage respectively.

As shown by the data in Table 30, compared to the respondents with weak linkage, the proportion of respondents having strong linkage with the members of FUG, FUC and government staff appeared to be more participative. This has been revealed by the involvement of a larger proportion of respondents with strong linkage and smaller proportion of respondents with weak linkage, at high level of participation in all the three activities. However, a majority of the respondents, irrespective of the degree of linkage, had only a medium level of participation.

The findings indicate that the respondents who had more frequent contacts with members of executive committee of the FUG, their peers and government personnel were found to be more active participants than those without such contacts. These results point to the importance of interaction and exchange of information among the members of FUGs themselves as well as with forestry personnel for promoting the participatory process.

### **Mass Media Exposure and Participation**

The potentials of mass media in extension and transfer of technology cannot be overemphasized. Following Malla (1987) who maintains that extension must be considered as an integral part of community forestry programmes rather than as an additional activity, it becomes reasonable to examine the extent of participation by exposure to mass media. Among the various mass media, the ones found in operation in the study area included radio and printed materials such as pamphlets, bulletin, leaflets, news letter and posters. Table 31 presents the data on the extent of participation of



respondents in relation to their exposure to mass media, that is, radio broadcast and printed materials.

Table 31

Level of Participation by Exposure to Mass Media (N = 200)

Activities	Level of Participation	Mass Media Exposure (%)		N
		Yes	No	
Decision-making	Low	14.7 (7.4)	32.1 (29.5)	44
	Medium	56.0 (64.7)	52.4 (49.2)	109
	High	29.3 (27.9)	15.5 (21.3)	47
Implementation	Low	17.2 (14.7)	29.8 (26.5)	45
	Medium	39.7 (45.6)	58.5 (48.6)	95
	High	43.1 (39.7)	11.9 (25.0)	60
Benefit Sharing	Low	10.3 (16.2)	34.5 (22.7)	41
	Medium	65.5 (52.9)	48.8 (61.4)	117
	High	24.2 (30.9)	16.7 (15.9)	42

Note: The figures in the parentheses are related printed materials, and the free ones are related to radio broadcast.

It is evident that the proportion of those better exposed to mass media was larger at a high level in all the three activities in contrast to ones who were

not exposed. Nevertheless, the largest proportion of respondents from both the categories had medium level of participation in all the three activities. The low level of participation of the respondents who lacked exposure to mass media could be attributed to the fact that they were not all that aware of the significance of participating in community forest programmes. This finding implies a need for further intensification of use of more mass media in an attempt to create awareness among local people in view of promoting the quality as well as quantity of participation to a higher status.

### **Situational Aspects and Participation**

It is recognized that the extent of participation is likely to be influenced by the situations in which it takes place. The results of assessment of the extent of participation in relation to some situational factors are presented in this section.

#### **Physical Setting and Participation**

All the households included in this study are located in the hill terrains. The people experience various topographic and climatic conditions (detail see Chapter Four pages 117-118). The differential pattern and extent of participation among the FUG members might be rooted in topographical situation of a particular location in terms of convenience. The data regarding respondents' experience and observation about the convenience of the physical setting of the location in relation to participation in CFDP activities are presented in Table 32.

It was found that the respondents reporting highly convenient topographical situation had a higher level of participation in all the three activities. On the contrary, the proportion of involvement was smaller among those who found a harsh situation for themselves. The largest proportion of respondents having high level of participation constituted 50 percent in the case of implementation, where the topographical situation was reported to be highly convenient.

**Table 32**  
**Level of Participation by Physical Setting (N = 200)**

Activities	Level of	Physical Setting (%)			N
		Highly Favourable	Favourable	Unfavourable	
Decision-making	Low	10.0	20.5	32.8	44
	Medium	56.0	52.6	50.8	109
	High	34.0	22.9	16.4	47
	Total	100.0	100.0	100.0	200
Implementation	Low	18.0	21.7	26.9	45
	Medium	32.0	51.8	53.7	95
	High	50.0	26.5	19.4	60
	Total	100.0	100.0	100.0	200
Benefit Sharing	Low	16.0	14.5	31.5	41
	Medium	48.0	69.8	52.1	117
	High	36.0	15.7	16.4	42
	Total	100.0	100.0	100.0	200

The above findings imply that the trend of participation is linked with the physical situation in the study area. In other words, the topography or weather conditions have bearing on the extent of participation of the respondents. Thus, a lower extent of participation of some of respondents in CFDP activities could be attributed to harsh terrain and uneven geographical spread of community forests and inconvenient venue for meetings from the point of view of physical mobility of members of FUGs during a particular season. Based on the findings, it can be said that adjusting the schedule of forest management activities, as far as practicable, in accordance with the weather conditions and the location might enhance the level of participation.

### **Satisfaction and Participation**

As mentioned earlier, the proportion of respondents reporting satisfaction from their participation in CFDP activities constituted a majority (60.5 percent). It is interesting to note from the data in Table 33 that those who had derived a sense of satisfaction were found to be more participative in all the activities of CFDP. In contrast, a large proportion of dissatisfied respondents were found to be relatively less active. The low level of participation of some of the respondents might be due to the fact that they were not content with the distribution systems of benefits among the members of the FUG or with the extent of progress made by their respective FUGs/FUCs. It was learned during the informal discussion with the rural people in the study area that some of them being deprived of the fair share of benefits supposed to be accrued to them as result of their involvement in CFDP activities.

Table 33  
Level of Participation by Satisfaction  
(N = 200)

Activities	Level of Participation	Level of Satisfaction (%)		N
		Satisfied	Dissatisfied	
Decision-making	Low	24.4	17.4	44
	Medium	45.8	71.0	109
	High	29.8	11.6	47
	Total	100.0	100.0	200
Implementation	Low	25.2	17.4	45
	Medium	38.2	65.2	95
	High	36.6	17.4	60
	Total	100.0	100.0	200
Benefit Sharing	Low	13.0	34.8	41
	Medium	59.5	56.5	117
	High	27.5	8.7	42
	Total	100.0	100.0	200

The above findings imply that the extent of participation can be enhanced if the participants derive more satisfaction from their participation. As mentioned earlier, satisfaction is one of the ultimate essences of participation in development. Following Chaturvedi and Mitra (1982), who state that a development plan which does not generate satisfaction is futile, it becomes a imperative that each member derive a sense of satisfaction from their participation.

### Types of Participation

Types of participation indicates 'how' participation is taking place. In general, the way respondents involved themselves was on a voluntary basis and direct. In most cases the participation was an organized type but induced, that is, by the influence of FUG's decision, instead of via their own conviction. In few cases, participation was forced type, not because of the rules and regulations, but because of their poor socio-economic conditions with the hope of getting more material benefits.

In summing up, the preceding analyses and discussion show that the local residents who participated more actively in decision-making activities were those older in age, coming from Tamang ethnic group, original residents, belonging to multi-family, relatively literate, without secondary occupation, having high family income, and with multiple organizational memberships. With respect to the structural elements, the respondents coming from more formal FUGs, to which forests had been handed over were more participatory. The respondents who participated more intensively (1) had higher level of awareness about their group's activities, (2) were exposed to mass media and (3) had strong linkage with FUG members, FUC members and government personnel. Similarly, the respondents who were more satisfied from their participation and those who reported more convenient of physical setting in their locality had higher level of participation.

In general, the above description holds true in the case of participation in implementation and benefit sharing activities as well. Nonetheless, unlike in decision-making and benefit sharing, younger respondents were more active



participants in implementation. Likewise, economically worse-off respondents participated in implementation with higher intensity.

The analysis also shows that the majority of the respondents had medium and/or low level of participation in all the activities. In other words, only a small proportion of the them had high level of participation. Most respondents participated voluntarily and directly, but mainly under the influence of FUG's decision, rather than through their own will.

## **CHAPTER VII**

### **PARTICIPATION IN COMMUNITY FORESTRY AND ASSOCIATED FACTORS**

The first section of this chapter presents the analysis of association between five clusters of variables: (1) socio-demographic, (2) institutional, (3) structural, (4) linkage and (5) situational factors, and the level of participation among the members of Forest User Groups in community forestry. The second section is devoted to the examination of overall influence of selected independent variables on the extent of participation.

#### **Socio-demographic Factors**

##### **Ethnicity**

As mentioned earlier, the respondents were divided into two ethnic categories, namely Tamang and non-Tamang. The ethnicity being a categorical variable, it was measured in nominal scales. The Chi-square was employed to find out the relationship of ethnicity with participation among these two groups.

The Chi-square values of 36.80, 63.16 and 30.42 significant at less than 0.01 level of probability (Tables 35, 37 and 39) indicate the significant association of ethnicity with participation in decision-making, implementation and benefit sharing, respectively. Therefore, considering these Chi-square values and the earlier findings indicating involvement of the larger proportion of Tamangs in all the three CFDP activities, the findings confirm that the

Tamangs were more active than their counterparts coming from other social groups.

### **Educational Status**

The inverse relationship between literacy level and participation in CFDP activities is shown in Tables 34, 36 and 38. However, this type of relationship was found to be significant only in the case of implementation ( $r = -0.1589$ ) and benefit sharing ( $r = -0.1621$ ). This finding failed to offer support to Nelson et al. (1960), Alang (1977), and Sharma (1989) who indicated a positive relationship between education and participation. Thus, the present study concludes that the more actively involved in implementation and benefit sharing were either illiterate or less educated members of the FUG. One possible reason for this could be that the better educated rural mass felt a lower need for participation as CFDP is not directly intended to cater to the needs of the educated *per se*. Another possible explanation for such relation could be that by and large, the respondents were either the illiterate or less educated and that the more educated ones did not involve themselves to the extent their illiterate peers did. The findings appear to be logical in considering the characteristics of the members of the FUGs, who were endowed with lower level of education.

### **Residential Status**

In the study villages, two categories of respondents were found on the basis of their place of birth. For the purpose of analysis, they were labeled as (1) original residents: those who were born in the same village where they had

been currently residing and (2) migrants: those born elsewhere but had later on settled in the present place of living.

The relationship between residential status of respondents and their level of participation was examined. The earlier finding of residential status with regard to the level of participation was that the original residents were more participative in all the three CFDP activities than those of migrants (refer Chapter Six, pages 192-194). In order to be more precise and accurate, this relationship was verified using Chi-square test. The results of the test indicate that such relationship was found to be significant only in the case of implementation and benefit sharing activities (see Table 37 and 39). It failed to show significant association between residential status and participation in decision-making (Table 35). Thus the results confirmed that residential status affected the level of participation. It can, therefore, be safely concluded that the original residents, while they appeared to have enjoyed relatively more benefits, also tended to contribute more of their labour and materials to CFDP at the implementation stage.

### **Occupational Status**

Occupational status is a parameter of a person's state of employment. An individual engaged in a multitude of gainful activities may not afford to devote his or her time with equal intensity in other activities. This assumption was examined in order to determine the relationship between the respondents with or without secondary occupation and participation in CFDP activities. Tables 35, 37 and 39 contain the results of the analysis.

The earlier finding (refer Table 24) that, generally, respondents without secondary occupation had participated more actively in the CFDP activities, appeared to be valid only in the case of decision-making. The data presented in Tables 37 and 39 do not show any association of occupational status with participation in the case of implementation and benefit sharing even at minimum acceptable level of significance. Therefore, taken together the significant Chi-square value (Table 35) and the larger proportion (29.3 percent) of respondents at a high level of participation (refer Table 24), the finding suggests that the level of participation tends to be further enhanced if an FUG opts for such individuals as its members who are relatively less busy from a particular household.

### **Organizational Membership**

In viewing the relationship between organizational membership and participation, two types of analyses were utilized, namely, Pearson product-moment correlation and Chi-square test.

The correlational analyses (Tables 34, 36 and 38) show that there exists a significant and positive relationship between organizational memberships and participation in decision-making, implementation and benefit sharing. These findings imply that the level of participation among the members of the FUG in decision-making tends to be higher with the pluralistic membership and holding of responsible positions in social organizations. From this analysis, it can be deduced that membership in other organizations acts as motivating factor in driving the members of the FUGs towards increased participation in CFDP activities as well. This also reflects the fact that people with

membership in social organizations understand the value of participation in development activities by virtue of their wider social horizon resulting from social interactions. Hence, the higher level of participation of such individuals was apparent.

**Table 34**

**Correlation between Independent Variables and Participation  
in Decision-making (N = 200)**

Independent Variables	Correlation Coefficient (r)
Age	.0138
Length of Residence	.0616
Family Size	.0662
Years of Schooling	-.0853
Annual Gross Family Income	.0095
Land Holding	.1075
Organizational Membership	.3225**
Empowerment	.6891**
Decentralization	.2646**
FUG Size	-.3084**
Government-FUG Linkage	.4099**
Supply of Fuelwood from Private Source	-.1021
Supply of Fodder from Private Source	-.0601
Experience with Development Intervention	.3746**

\* Significant at 0.05 level of probability

\*\* Significant at 0.01 level of probability



In another analysis, the Chi-square test was performed to investigate whether or not the respondents with and without organizational membership differ with respect to their extent of participation in decision-making. The outcome of the analysis is based on comparing the relative frequencies of two groups, that is, respondents with and without organizational membership. Chi-square value of 15.91 significant beyond 0.01 level of probability indicates that the two groups of respondents differ distinctly in terms of their extent of participation (Table 35). This also implies that the extent of participation tends to increase with multi-organizational membership.

Among the socio-demographic factors that were not found to be significantly associated with participation were age, family size, annual gross family income and land holding.

### **Institutional Factors**

#### **Politico-administrative Support**

It has been indicated earlier (see Table 11) that, in general, respondents reported the receipt of necessary administrative support from the DFO for their FUGs. However, the findings from the statistical analysis indicate that a greater extent of participation could be expected only from the members of those FUGs which received ample amount of such support. The factor administrative support was not found to be significantly associated with participation in benefit sharing.

The computed Chi-square values of 10.48 and 7.99, respectively for decision-making and implementation, significant at 0.01 level of probability

(Table 35 and 37) signify that members who had a perception that their FUGs received adequate administrative support were likely to participate more actively in development programmes. This reflects that any administrative delay in providing FUGs with the necessary service might also lead to a lack of willingness on the part of the FUG members to participate. The implication

**Table 35**  
**Relationship of Independent Variables with Participation**  
**in Decision-making (N = 200)**

Independent Variables	Chi-square* Value	Significance Level
Ethnicity	36.80	.001
Residential Status	2.71	.256
Family Structure	0.12	.199
Occupational Status	13.23	.001
Organizational Membership	15.91	.001
Administrative Support	10.48	.005
Mode of Formalness	6.78	.033
Handover of Forest	6.15	.046
FUC-FUG Linkage	41.68	.001
FUG-FUG Linkage	32.74	.001
Radio Programme	10.85	.004
Printed Materials	12.88	.001
Satisfaction	12.64	.001

\* At 2 degree of freedom

of this finding has more to do with the FUGs which have not yet been registered with the DFO. Therefore, this finding suggests that the implementing agency's withdrawal of support for the FUGs might result in the latter's disorganization. This is because, as stated by Rondinelli et al. (1987), in many developing countries, local organizations often lack the incentive, adequate funds, technical expertise and management capacity to provide the necessary services.

### **Decentralization**

With the failure of rural development projects following top-down approach, many implementing agencies as well as the donors have now been giving increased emphasis to explore the implications of decentralization. In the context of Nepal, it had a long history of unsuccessful measures to improve efficiency and development performance through decentralization, despite its clearly stated Acts and Bye-laws.

In the present study, the correlational analyses (Tables 34, 36 and 38) reveal that there exist significant and positive relationship between decentralization and participation in decision-making ( $r = 0.2646$ ); implementation ( $r = 0.2007$ ); and benefit sharing ( $r = 0.1640$ ). These results could be good indicators of FUG members' tendency to participate more actively in CFDP activities with the implementation of more decentralized administrative approach. The finding that the decentralization has a significant relationship with participation is consistent with the findings of Finsterbusch and Wicklin (1989) who state that centralization of the responsible government agency as well as centralization of the project are negatively

**Table 36**  
**Correlation between Independent Variables and Participation**  
**in Implementation (N = 200)**

Independent Variables	Correlation Coefficient (r)
Age	.0118
Length of Residence	.1201
Family Size	.0032
Years of Schooling	-.1589*
Annual Gross Family Income	-.0588
Land Holding	.0087
Organizational Membership	.2773**
Empowerment	.4684**
Decentralization	.2007*
FUG Size	-.2535**
Government-FUG Linkage	.3478**
Fuelwood Supply from Private Source	-.1850*
Fodder Supply from Private Source	-.1675*
Experience with Development Intervention	.2472**

\* Significant at 0.05 level of probability

\*\* Significant at 0.01 level of probability

related to participation. This result also lends support to Okamura (1986), who states that decentralization of authority eliminates structural obstacles to popular participation. The conclusion of above findings are in line with the earlier findings of this study. In other words, it is imperative that authority is

delegated, although *de facto*, to the FUG to have legal control over community forest land for management and utilization.

The findings imply that there is a need for the implementing agency to delegate more decision-making authority to the FUGs for the management of community forests in achieving the vested interest of the community as well as the government. This also reflects the fact that introduction of the new forest Act that provides FUG with authority to manage and utilize is a landmark step in this direction. However, the withdrawal of such an authority from the people might lead to deleterious effect on the harmonious triangular relationship between government, people and forest.

### **Empowerment**

In a country of heterogeneity, in terms of socio-cultural and economic status, some members of the social system are likely to be pushed out to the periphery and denied access to decision-making rights in project activities from planning through evaluation and to share in the control over resources. On the other hand, others from the same social system are likely to enjoy more of such rights and benefits of development. In consideration of the conclusion of an earlier finding (see Table 13) indicating a need to make each members of FUG capable of participating, the relationship between empowerment and the level of participation was examined. It was found that there existed a significant and positive correlation between these two variables (Tables 34, 36 and 38). This has been evidenced by a moderate correlation ( $r = 0.6891$ ), indicating that participation in decision-making is likely to be further enhanced with the redistribution of more power among the FUG members. The same

holds true in the case of the relationship of empowerment with participation in implementation ( $r = 0.4684$ ) and benefit sharing ( $r = 0.1796$ ).

It can be deduced from the above results that, given more power in the form of opportunities for the people, their level of participation is likely to be further enhanced. It is, therefore, implied that empowering people is essential to foster participation. This is because lack of such power on the part of the target beneficiaries would mean depriving them from the opportunity to participate in development activities.

### **Handover of Forest**

The computed Chi-square values of 6.15, 6.26 and 14.22, significant at less than 0.05 level of probability (Tables 35, 37 and 39) in the case of decision-making, implementation and benefit sharing respectively signify that members of FUG with forest being already handed over tended to participate more actively. This finding corroborates the earlier finding (refer Table 29) that the members of those FUGs to which the forests have been handed over by the DFO were more participative. This reflects that handover of forests is one of the crucial functions the DFO is reckoned to be performing in order to get support of local residents for the protection and management of forest.

## **Structural Factors**

### **Size of FUG**

As mentioned earlier, the size of FUGs that the researcher came across in the study area ranged from a minimum of 23 to a maximum of over 500 member households. Illustrating a case of an FUG with 544 members, King et



al. (1990) considered this size to be a large group as it does not possess any sense of 'common identity' or 'community' and lacks any sense of organizational basis for acting together. Viewed from this perspective, the size of FUGs in terms of the number of member households has a significant bearing on the level of participation among members of the FUGs in community forest management.

The outcome of the correlational analyses (Tables 34, 36 and 38) indicate a significant but inverse relationship between the FUG size and participation in decision-making ( $r = -0.3084$ ), implementation ( $r = -0.2535$ ) and benefit sharing ( $r = -0.2219$ ). These findings signify that the extent of participation tended to be enhanced with the decrease in the size of the FUG. This result appears to contradict the view of Johnson and Clark (1982), quoted in Esman and Uphoff (1984), who suggest that smaller local organizations are not necessarily better. On the other hand, it seems to conform to many authors (Stogdill, 1959; Douglas, 1976; Hunter, 1976; Doherty and Jodha, 1979; Golladay, 1983) who favour small group situation of local organization, instead of larger ones, for its better performance.

### **Mode of Formalness**

The earlier finding of this study indicated that a great majority (98.5 percent) of the respondents preferred their FUGs to be a formal organization (refer Table 27). The cross-tabular analysis also revealed that the proportion of respondents belonging to more formal FUGs was nearly three times greater at a higher level of participation, as opposed to those who came from less formal groups. However, in order to verify this logically, the Chi-square test was

carried out to determine whether or not these two categories of respondents differed in terms of their level of participation.

**Table 37**  
**Relationship of Independent Variables with Participation**  
**in Implementation (N = 200)**

Independent Variables	Chi-square* Value	Significance Level
Ethnicity	63.16	.001
Residential Status	7.73	.020
Family Structure	1.17	.423
Occupational Status	1.72	.421
Organizational Membership	11.08	.003
Administrative Support	7.99	.018
Mode of Formalness	7.20	.027
Handover of Forest	6.26	.040
FUC-FUG Linkage	23.27	.001
FUG-FUG Linkage	23.35	.001
Satisfaction	13.76	.001
Radio Programme	22.78	.001
Printed Materials	6.09	.047

\* At 2 degree of freedom

The calculated Chi-square values of 6.78 and 7.20 significant at less than 0.05 level of probability (Tables 35 and 37) in the case of participation in decision-making and implementation respectively indicate that the respondents

coming from more formal and less formal FUGs tended to differ in their level of participation. This finding supports the statement that local organizations need to take formal shape for its effective functioning. Also supporting this finding are: (1) Sherraden (1991) who, from her study concludes that a formal structure of community participation increases villagers' involvement in local health programming and (2) Dore (1971), quoted in Esman and Uphoff (1984) who postulates that informal organization based on traditional norms and power structure will be either unable to perform more modern development tasks or unwilling to direct efforts in ways that will help the less advantaged sector of community.

From this finding, together with earlier finding indicating respondents' own preference to render their FUGs a formal organization, it can be deduced that formalization of the FUGs might lead to still higher extent of participation of their members. Therefore, the finding signifies the necessity for the FUGs to obtain a formal status by means of fulfilling the requirements of their own as well as that of the DFO. Moreover, formalization of a FUG also means making its members accountable for group activities and responsibilities.

### **Linkage Factors**

Influence of respondents' linkage with members of the FUG, FUC and Government personnel, in terms of interaction and exchange of information, on their level of participation was assessed. The Chi-square value of 41.68 and 32.74 for FUC-FUG linkage and FUG-FUG linkage significant at acceptable level of probability demonstrate that there exist significant association of FUC-FUG linkage and FUG-FUG linkage with participation in decision-making

(Table 35). The same holds true in the case of implementation and benefit sharing as well (Tables 37 and 39).

**Table 38**  
**Correlation between Independent Variables and Participation**  
**in Benefit Sharing (N = 200)**

Independent Variables	Correlation Coefficient (r)
Age	.1069
Length of Residence	.1353
Family Size	.1446
Years of Schooling	-.1621*
Annual Gross Family Income	.0333
Land Holding	.1394
Organizational Membership	.3285**
Empowerment	.1796*
Decentralization	.1640*
FUG Size	-.2219**
Government-FUG Linkage	.2899**
Fuelwood Supply from Private Source	-.2394**
Fodder Supply from Private Source	-.2082**
Experience with Development Intervention	.0998

\* Significant at 0.05 level of probability

\*\* Significant at 0.01 level of probability

On the other hand, the significant and positive correlation between government linkage and participation in decision-making ( $r = 0.4099$ ), implementation ( $r = 0.3478$ ), and benefit sharing ( $r = 0.2899$ ) signifies that the FUG members with strong linkage with government personnel are associated with a higher level of participation (see Tables 34, 36 and 38).

These results, as a whole, suggest that respondents with strong linkage tended to have a higher level of participation. One reason for this could be that the more active participants had opportunities to have more frequent contact owing to location advantage of the contact points to their proximity. Another could be that these respondents had better understanding of the significance of participation, as a result of more frequent interaction with their own peers and government personnel. In fact, for FUG members, interaction with peer groups, executive committee members and government officials is important in order to keep themselves abreast of information regarding matters related to community forest management. It is, therefore, likely that lack of knowledge and information on the part of the forest users may avert them from active participation in CFDP activities.

### **Exposure to Mass Media**

As described earlier, respondents' exposure to mass media was measured by asking them whether or not they listened to radio broadcast and read printed materials pertaining to forest management. Since these variables were measured at nominal scale their association with participation was determined by performing Chi-square test.

As can be seen from Tables 35, 37 and 39, the computed Chi-square values, for both radio programme and printed materials, were found to be significant at an acceptable level of probability for participation in all the three activities of CFDP.

**Table 39**

**Relationship of Independent Variables with Participation in Benefit Sharing (N = 200)**

Independent Variables	Chi-square* Value Level	Significance
Ethnicity	30.42	.001
Residential Status	9.00	.011
Family Structure	3.64	.162
Occupational Status	4.93	.084
Organizational Membership	8.44	.014
Administrative Support	0.53	.766
Mode of Formalness	2.00	.367
Handover of Forest	14.22	.001
FUC-FUG Linkage	20.92	.001
FUG-FUG Linkage	7.29	.026
Satisfaction	18.14	.001
Radio Programme	17.51	.001
Printed Materials	6.27	.043

\* At 2 degree of freedom



These results are indicative of the fact that listening to radio programmes on forest management and utilization of printed materials positively affected their level of participation. This is in line with the earlier finding that those who were better exposed to mass media tended to be more participative in CFDP activities than those who were not exposed. It is, therefore, reasonable to expect that exposure to mass media like radio programme and printed materials, aside from the traditional communication media, can help the concerned beneficiaries to keep them abreast of the information about forest management.

### **Awareness**

For effective participation, the people concerned should be familiar with the development undertakings. Table 40 presents the results of the analysis of variance to determine the difference in the mean scores of three categories of respondents with low, medium and high level of awareness regarding the programme activities of their FUGs. The data reveal the existence of significant differences in the mean scores on participation in all the three CFDP activities.

Further, the Scheffe test indicates that these three categories of respondents differed significantly in terms of their extent of participation, meaning that the level of awareness is associated with the extent of participation. From the findings, it is clear that the respondents who were more aware tended to involve more actively in the CFDP activities. The results suggest that prior information about the development programme to the intended beneficiaries is likely to increase the intensity of participation.

Therefore, awareness on the part of participants is imperative, and so is the view of Seetharam (1990) who found that the lack of awareness prevented 17.5 percent of non-participants from participation.

**Table 40**

**Summary of Analysis of Variance for Mean Scores on  
Participation and Awareness of Group Activities (N = 200)**

Activities	Source	df	MS	F	Sig F
Decision-making	Between groups	2	1714.772	53.810	.000
	Within Groups	197	31.867		
Implementation	Between Groups	2	13.337	5.796	.004
	Within Groups	197	2.301		
Benefit Sharing	Between Groups	2	9.881	6.909	.001
	Within Groups	197	1.430		

**Situational Factors**

**Physical Setting**

The computed F values significant at less than 0.05 level of probability (Table 41) signify that there exist differences between the mean scores on participation in decision-making, implementation and benefit sharing among three groups of respondents reporting that the situation was highly favourable, favourable and not favourable for their participation.

Further, the Scheffe test performed after the analysis of variance determined that within the groups, there was a difference between the respondents reporting highly favourable and not favourable. This test signifies that those in a relatively favourable situation in terms of physical setting tended to be significantly better participants than those in an unfavourable one in the case of decision-making and benefit sharing activities. As for the implementation activity, the respondents experiencing two extreme situations differed significantly, whereby those reporting unfavourable were less active participants than those in a highly favourable condition.

**Table 41**  
**Summary of Analysis of Variance for Mean Scores on**  
**Participation and Physical Setting (N = 200)**

Activities	Source	df	MS	F	Sig F
Decision-making	Between groups	2	271.563	5.838	.003
	Within Groups	197	46.519		
Implemen-tation	Between Groups	2	8.960	3.820	.024
	Within Groups	197	2.346		
Benefit Sharing	Between Groups	2	11.719	8.303	.000
	Within Groups	197	1.411		

This finding together with the earlier finding seem to suggest that the difficulty associated with harsh mountain terrain, the weather condition and

distance to be traveled often affected the level of participation of FUG members. This finding is quite consistent with the report of Chhetri and Pandey (1992) who mention the physical distance between the residential area of forest users and forest to be protected and managed as an important factor that influence participation. Nelson et al. (1960), also explains the influence of place of residence in community on participation to some extent. Similarly, Cohen and Uphoff (1977) describe the constraints in people's participation in terms of physical environmental setting where the project is located.

### **Forest Situation**

This study assumes that the better the condition of a person in terms of fulfillment of fuelwood and fodder through his or her own source, the better would be the forest situation in proximity of his or her locality and the lower will be his or her extent of participation. With this assumption, the relationship between forest situation in terms of fuelwood and fodder fulfilment and participation was assessed. As indicated by the Pearson product moment correlation coefficients (Table 34, 36 and 38), the relationship of forest situation with participation in all the three CFDP activities was found to be negative. However, the relationship between participation in decision-making and fuelwood and fodder fulfillment could not reach the acceptable level of significance. These findings suggest that the extent of fulfilment of tree products from private source could be a good indicator of the extent participation in CFDP activities. The implication of this finding is that the extent of individual participation tended to be lower where the forest situation was relatively better in terms of supply of tree products.

### **Experience with Development Intervention**

If one is not pessimistic and sceptical about development programmes, the extent of his or her involvement could be expected to be greater. With this consideration, the relationship of the respondents' experience with development intervention and participation was examined. The results obtained from correlational analyses, that is, correlation coefficient value of  $r = 0.3746$  and  $r = 0.2472$  for decision-making and implementation respectively (Tables 34 and 36), show a significant and positive relationship of the independent variable 'experience with development intervention' with participation in decision-making and participation in implementation. This indicates that the more optimistic the beneficiaries are, the greater would be their tendency to participate. The finding appears to be favourable on the part of the implementing agency, because a development programme like community forestry which needs public support cannot be implemented in the face of hostile and sceptical population. The implication of this result is that it becomes imperative for the agency concerned to understand people's perception about community forestry programme while making interventions aimed at bringing about social change. This would help avert any adverse effect on the development projects due to misunderstanding, mistrust and hostility between people and implementing agency.

### **Satisfaction**

The Chi-square values of 12.64 (decision-making), 13.76 (implementation) and 18.14 (benefit sharing) significant beyond 0.01 level of probability (Tables 35, 37 and 39) illustrate that besides extrinsic benefits that



accrue to participants, a sense of mental satisfaction on the part of the beneficiaries is an important impetus towards the promotion of level of participation. It, therefore, implies that generating satisfaction among beneficiaries from their participation is an essential step towards enhancing the qualitative as well as quantitative aspects of participation.

### **Influence of Selected Factors on Participation**

The preceding section dealt with the analysis of each of the variables selected for the study. While some independent variables were found to be significantly associated with participation, others were not so. In this section the overall influence of the independent variables that had significant relationship with the dependent variable is examined. As the sample respondents were found to be distributed more or less normally over all the variables, multiple regression analysis was utilized in order to determine the influence of selected independent variables on participation. One of the advantages of this analysis is that while it shows the combined effect of a set of independent variables, it also demonstrates the separate effect of each independent variable controlling for the others. Moreover, multiple regression can also be used with categorical variables through a technique known as dummy coding (Hedderson, 1987). In the present study also, the variables that were measured in ordinal scale were codified into dummy variables before they were utilized in regression analysis.

The symbol 'R' is multiple correlation coefficient which signifies the relationship between the dependent variable and the entire set of independent variables. The R-Square (coefficient of multiple determination) indicates the



proportion of variance in the dependent variable contributed by independent variables. In this study, the adjusted R-Square was utilized as it takes into account the degree of freedom as well. The Beta values indicate the value of standardized regression coefficient. Beta values were utilized to interpret the explanation of the amount of variance contributed by each of the independent variables in the regression model, in standard deviation units. Beta represents the effect that a standard deviation difference in the independent variable would have on the dependent variable in standard deviation. The 'F' statistic measure indicates whether or not the explanation of variance contributed by the individual variables in the model is significant. The Sig F (significance of F) indicates the level of probability.

#### **Influence of Independent Variables on Participation in Decision-making**

Table 42 presents the results of multiple regression analysis between selected independent variables and participation in decision-making. The 'R' = .84 shows a high relationship between independent variables and dependent variable. The adjusted  $R^2 = .6827$  indicates that about 68 percent of the variance the participation in decision-making was jointly explained by the set of 18 independent variables used in the regression equation. The ANOVA of the regression shows that the ratio of  $F = 24.78$  was significant at less than 0.01 level of probability. This means the explanatory power of the regression model used was statistically sound, thereby indicating that the independent variables were related to the dependent variable.

Of the 18 independent variables, only five of them were found to be significantly related to participation in decision-making. The Beta values of

Table 42

**Regression Analysis: Independent Variables and  
Participation in Decision-making (N = 200)**

Independent Variable	Beta	Sig T
Ethnicity	.161944	.0035
Occupational Status	.049072	.2629
Organizational Membership	.089491	.0420
Administrative Support	.049550	.2893
Empowerment	.531039	.0000
Decentralization	-.025497	.5998
Handover of Forests	.014973	.7538
Mode of Formalness	.035906	.4699
FUG Size	-.134166	.0081
FUG-FUG Linkage	.082451	.8191
FUC-FUG Linkage	.040655	.5461
Government-FUG Linkage	.061839	.2094
Awareness of FUG Activities	.245987	.0000
Radio Programme	.060320	.2022
Printed Materials	.013679	.7882
Physical Setting	.009673	.8312
Experience with Development Intervention	.003294	.9519
Satisfaction	.050437	.3123

R = .84    Adjusted R<sup>2</sup> = .6827    F = 24.7862    Sig F = .0001

the significant variables show that for every standard deviation unit change in participation in decision-making, there was 0.53 unit change in the empowerment, 0.24 unit change in awareness, 0.16 unit change in ethnicity, 0.13 unit change in FUG size and 0.08 unit change in organizational membership.

The above analysis suggests that empowerment on the part of the members of FUG, awareness, ethnicity, FUG size and organizational membership contributed significantly to the explanation of variance in the participation in decision-making. Hence, it can be deduced that the level of participation of members of FUG in decision-making tend to be higher in a situation where: (1) people have more power in terms of opportunities provided for participation, (2) they are more aware of their group activities, (3) other ethnic groups are also encouraged to participate, (4) the FUG size is optimum in terms of number of members rather than large ones, and (5) forest users have multiple memberships in social organizations.

### **Influence of Independent Variables on Participation in Implementation**

The F value of 9.27 with 21 and 178 degrees of freedom for analysis of variance of the regression (Table 43) indicates the statistically soundness of the regression model. The adjusted  $R^2 = .4660$  indicates that, overall, about 47 percent of variance in the dependent variable was explained by a set of 21 independent variables as combined effect. The ' $R$ ' = .72 is indicative of the fact that there exists a moderate relationship between independent variables and dependent variable.

Table 43

**Regression Analysis: Independent Variables and  
Participation in Implementation (N = 200)**

Independent Variables	Beta	Sig T
Ethnicity	.263357	.0020
Residential Status	.139700	.0137
Years of Schooling	-.072898	.2185
Organizational Membership	.067623	.2700
Administrative Support	-.023507	.7017
Empowerment	.376568	.0001
Decentralization	.009926	.8749
Handover of Forests	.042904	.5229
Mode of Formalness	.122356	.0608
FUG Size	-.010585	.8708
FUG-FUG Linkage	.069515	.4245
FUC-FUG Linkage	.138620	.1114
Government-FUG Linkage	.098888	.1247
Awareness of FUG Activities	.016694	.8080
Radio Programme	.115441	.0145
Printed Materials	.045838	.4976
Fuelwood Supply from Private Source	-.016637	.8497
Fodder Supply from Private Source	-.142874	.1351
Physical Setting	.063320	.2877
Experience with Development Intervention	-.044446	.5340
Satisfaction	.027914	.6923

R = .72    Adjusted R<sup>2</sup> = .4660    F = 9.2711    Sig F = .0001

Further review of Table 43 revealed that when all other variables were held constant, there were only three variables which significantly contributed to explanation of the variance in the dependent variable in the regression model. The Beta values indicate that empowerment contributed greatly to the explanation of variance in the dependent variable. However, on the whole, the regression analysis tends to confirm that empowerment, ethnicity, radio programme and residential status were the important factors, in order of intensity, that influenced the extent of participation in implementation.

The implications of the outcome of the regression analysis is that the greater the extent of opportunity provided to the FUG members, the higher would be the level of their participation. It is also apparent that the ethnicity influenced the level of participation. Similarly, listening to radio programme related to forest management could also help in better understanding of the importance of people's participation and hence, a greater extent of participation. Likewise, the original residents compared to migrants, in the community would contribute more labour and necessary materials in the implementation stage.

#### **Influence of Independent Variables on Participation in Benefit Sharing**

In Table 44, the symbol ' $R$ ' = .63 indicates that the independent variables included in the regression model were significantly related to dependent variable, that is participation in benefit sharing. The adjusted  $R^2$  = .3439 signifies that about 34 percent of the variance in the dependent variable was jointly contributed by a set of 18 independent variables. An  $F$  value of 6.79 with 18 and 181 degree of freedom, significant at less than 0.01

Table 44

**Regression Analysis: Independent Variables and  
Participation in Benefit Sharing (N = 200)**

Independent Variables	Beta	Sig T
Ethnicity	.161642	.0793
Residential Status	.095213	.1254
Years of Schooling	-.089344	.1696
Organizational Membership	.129351	.0491
Empowerment	.003711	.9576
Decentralization	.146377	.0331
Handover of Forest	.156981	.0344
FUG Size	.109557	.1207
FUG-FUG Linkage	.101204	.2798
FUC-FUG Linkage	.207582	.0284
Government-FUG Linkage	.060310	.3941
Awareness about FUG Activities	.016603	.8205
Radio Programme	.061629	.3735
Printed Materials	.214273	.0034
Physical Setting	-.005452	.9337
Fuelwood Supply from Private Source	-.262668	.0073
Fodder Supply from Private Source	-.160595	.1273
Satisfaction	.192777	.0131

R = .63    Adjusted R<sup>2</sup> = .3439    F = 6.7956    Sig F = .0001



level of probability indicates that the regression model used was statistically significant in explaining the variance in the dependent variable.

Regarding the contribution made by each of the independent variables, the Beta values indicate that fuelwood supply from private source (Beta =  $-.26$ ) provided greater explanation of the variance in the participation.

The finding suggests that the members of FUG who had relatively more supply of fuelwood from their own land tended to be less participative than those who either did not have or had lesser supply of fuelwood. After all, one of the intentions of involvement of people in CFDP is to derive benefit in terms of tree products. These people might have had enough supply of tree products from their own source, hence the lower intensity of participation in CFDP activities. This also implies that community forest can be better protected if local people establish private forestry.

The next important variable was found to be printed materials (Beta =  $.21$ ) contribution of which accounted for 21 percent in the explanation of variance. The other variables which also contributed in the explanation of variance were FUC-FUG linkage (Beta =  $.20$ ), satisfaction (Beta =  $.19$ ), handover of forests (Beta =  $.15$ ), decentralization (Beta =  $.14$ ) and organizational membership (Beta =  $.12$ ). The deduction that can be made from these results is that the extent of participation tend to be greater when forest users (1) learn and understand the significance of community participation in forest management through printed materials, (2) have better interaction with FUC members, (3) derive satisfaction from their participation, (4) have forest handed over to them, (5) acquire more authority to manage and utilize the

community forests, and (6) also join other social organizations so that they better understand the advantages of participation.

In summary, the relationship between participation and ten socio-demographic factors, namely, age, educational status, ethnicity, residential status, family structure, occupational status, family income, land holding and organizational membership was examined. Two variables namely, ethnicity and organizational membership had a significant association with participation in decision-making, implementation and benefit sharing. Educational status and residential status were significantly associated with participation in implementation and benefit sharing. However, the relationship of participation with educational status was negative. The factor occupational status had a significant association with participation in decision-making.

The factors such as empowerment, decentralization, handover of forests, FUG size, FUC-FUG linkage, FUG-FUG linkage, government-FUG linkage, awareness of FUG activities, radio programme, printed materials, physical setting, and satisfaction were significantly associated with participation in decision-making, implementation and benefit sharing.

The factors that were significantly associated with participation in decision-making and implementation were administrative support, mode of formalness and experience with development intervention. Similarly, fuelwood supply and fodder supply from private source had a significant, but negative correlation with participation in implementation and benefit sharing.

The regression analysis between a set of 18 factors and participation in decision-making showed that about 68 percent of the variance explained in the

level of participation was attributed to the factors considered in the regression model. The Beta values showed that empowerment, awareness, FUG size and organizational membership were the factors that significantly contributed to the explanation of variance in the level of participation.

Likewise, the results of multiple regression analysis between a set of 21 factors and participation in implementation indicated that these variable explained 46 percent of the variance in the level of participation. As the Beta values showed, empowerment, ethnicity, radio programme and residential status were the important factors contributing to the explanation of variance in the participation level.

A similar analysis involving 18 factors and participation in benefit sharing revealed that these 18 factors accounted for 34 percent variance in the level of participation. The Beta values indicated that fuelwood supply from private source, printed materials, FUC-FUG linkage, satisfaction, handover of forest, decentralization, and organizational membership were the important factors that significantly contributed in explaining the variance in the participation level.

## **CHAPTER VIII**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter presents a summary of the background of the study, methodology, findings, conclusions drawn based on the findings and recommendations.

This study was designed to examine the nature and extent of participation of people in various stages of the Community Forestry Development Programme (CFDP). The specific objectives of the study were: (1) To examine the general background of members of Forest User Groups, and the Village Development Committees; (2) To study the context of community forestry programme in which participation is to occur; (3) To determine the level of participation among FUG members in various activities of the community forestry programme; (4) To examine the relationships between selected individual attributes and participation in community forestry programme; and (5) To identify the factors that influence participation in community forestry.

The study was conducted in three purposively selected Village Development Committees (VDCs) of Dhading District in Nepal. A multi-stage sampling technique was adopted for selecting the subjects. From these VDCs, 10 FUGs were purposively selected. A total of 200 respondents from 10 FUGs were proportionately selected through a simple random sampling method from an accessible population of 570 household members. The household members so selected served as the unit of enquiry and analysis for the study.

A multi-method approach of data collection was utilized in order to accomplish the research objectives. However, the survey method constituted the main tool of information gathering. A pre-tested interview schedule containing both close-ended as well as open-ended questions was utilized. Other methods employed for gathering additional data were personal observation, informal interviews and group discussion. Data were also sought from secondary sources.

Data were analyzed utilizing the Statistical Package for the Social Sciences (SPSS) computer software. Both descriptive and inferential statistics were used to describe the data and draw meaningful conclusions. Cross-tabulations were carried out to set up frequency distribution of one attribute against another. The Chi-square test of significance was performed to explore whether there existed any relationship between predetermined pairs of variables. Likewise, ANOVA was carried out to determine if there existed any significant differences between respondents from different categories. While, Pearson product moment correlation was used to determine the magnitude and direction of the relationship between the dependent variable and selected independent variables, the multiple regression was used to explain the influence of selected variables on the dependent variable.

The dependent variable for this study was participation. There were three aspects of participation examined, namely, decision-making, implementation and benefit sharing. Five clusters of variables, namely, socio-demographic, institutional, structural, linkage and situational were the independent variables.



## Findings

### The Profile of Respondents

The sample respondents consisted of the Forest User Group members, whose age ranged from 17 to 70 years, with an average age of 40. A large majority of them were males. The highest proportion of the respondents came from Chhetri caste group, which made up nearly a quarter of the respondents, followed other social groups namely, Brahmin, Tamang, Newar and other castes, in order of numerical strength. On the basis of ethnicity, Tamangs and non-Tamangs formed 16.5 and 83.5 percent respectively.

Most of the respondents were married. Slightly more than one-half of the sample came from nuclear families. While nearly two-fifth of them were from joint family, one-tenth of them belonged to extended family. A little more than one-half of them had a family of medium size (5 to 8 members) and about a quarter had large family size (more than 8 members). The average family size was 7.12. Only about one-fifth had a small family (less than 5 members). A large majority of them were the original residents and the remaining one-fifth were migrants. Their duration of stay in the present place of residence varied from four to 70 years. The educational attainment of respondents ranged from no formal education to college or university education; the majority of them had no any formal schooling. In terms of organizational membership, only one-fifth of them had membership in organizations other than the FUG. Of these, about one-third were office bearers and the remaining were just ordinary members.



The annual gross family income of the respondents varied from Rs. 5,000 to Rs. 85,000, with an annual average income of Rs. 19,030 per family. A significant majority of the respondents had farming as their primary occupation. A little less than one-third of them had secondary occupation. In terms of land holding, a little more than one-half owned less than one hectare. Those owning more than one hectare but less than 2.5 ha constituted 42 percent. While there were a few who were landless, there were also a few who owned more than 2.5 ha. The largest holding was 3.5 ha and the average was 0.893 ha.

### **Forest Management and Utilization**

The forestry developmental activities in Dhading District began in the early 1970s with the establishment of plantation and demarcation of forests. The CFDP has been in operation since 1980 and the District Forest Office has been administering the entire district since September 1983. Prior to April 1990, community forests were designated as Panchayat Forest (PF) and Panchayat Protected Forests (PPF). Before the introduction of the community forestry programme, forest protection activities were operated by a traditional system. There existed no formal organization responsible for forest management outside the government administration at the local level. The FUG, under the current CFDP, is supposed to be a formal one. Members of the FUG constituted those who had since long been managing and utilizing the forests in their proximity.

There was a feeling among the respondents that, by and large, the current community forestry approach, compared to the one implemented under the rubric of PF and PPF, was more appropriate. The provision of transfer of management authority to the villagers was one of its most applauded aspects. The people in the study area reported that the condition of the forests, with the advent of the current community forestry programme, was getting better over time. Nevertheless, the villagers still realized certain inadequacies in it. The slackness in the handover of forest was one of them. The others included inadequate arrangement for the afforestation programme to repair the damage and losses caused earlier, and technical and administrative assistance for establishment of forest nursery.

A significant proportion of the respondents were found to be heavily dependent on tree products for various household purposes. Similarly, the proportion of respondents utilizing tree products for various farm purposes varied from two-third to nearly all of them. Only a few of the respondents were self-sufficient in terms of supply of tree products to meet their farm and household needs.

In procurement task of tree products, more women than men were involved in terms of labour time spent. However, of the total respondents, only a small minority of the FUG members were female. Even in the Forest User Committees, female representation was only 11 percent, thus showing a significant gender difference in the role and relationship in community forest management.

According to a recently introduced Act, that is Forest Act - 1993, the District Forest Office (DFO) may handover any part of the national forest to user groups to legally manage and utilize upon the approval of the 'operational plan'. This kind of authority is delegated to only those Forest User Groups which have been duly registered with the DFO together with an Operational Plan. Despite such provision, the DFO had been following the earlier handing over procedure that needed prior sanction from the Regional Forest Directorate. Of the ten user groups included in the study, only two groups had the forest handed over to them by the DFO. There were a number of FUGs without having forests handed over to them. Eight of such groups have been included in the study. Of these eight groups, two groups were not even registered with the DFO. The reason for this was that this category of FUGs had not yet prepared their 'operational plan', which is a prerequisite for registration. In fact, almost all of the respondents realized the significance of the recognition of the FUGs in terms of registering with the DFO and handing over of community forests. During the time of the field study, formation of FUGs and their registration process were going on.

### **The Role of the Government in Community Forestry**

All the respondents perceived that their FUGs had been receiving administrative support from the DFO for management of community forests. However, there were more than one-half of them who complained about the inadequacy of the support provided. The instruments utilized to understand the respondents' perception regarding decentralization and empowerment indicated the need for a more decentralized bureaucratic approach and the people to be

empowered in terms of opportunities in order to enable them to participate in the CFDP activities with greater intensity.

### **Structural Elements of FUG**

An overwhelming majority of the respondents strongly opted for 'general assembly' kind of decision-making structure in preference to other structures such as authoritative (decision by single person) and executive committee (decision by a few). About four-fifths of the respondents perceived 'general assembly' as the most common decision-making pattern in the case of imposing sanctions. However, the FUC was perceived as the main decision-making body by the majority of the respondents in the case of nominating delegates (78.5 percent) and implementing group activities (52.5 percent).

The size (in terms of number of members) of the FUGs included in the study varied from 23 to 117. About one-tenth of the respondents felt that their group was too small. They preferred to have a bigger size but not exceeding 110 household members. A great majority of the respondents perceived their FUG as of 'optimum' size and only one-tenth of them felt it as being too big. On the whole, the respondents perceived the optimum group size as the one that consisted of 80 to 100 members.

The respondents perceived that either category of groups (one with mono-function and the other with multi-function) did not differ in terms of group's performance. There was only one FUG undertaking two projects (forestry and drinking water) concurrently.

Almost all of the respondents opted for having their FUGs as a formal organization. According to a classification made based on the FUGs having registered with DFO, about four-fifths of the respondents fell under the more formal category and the remaining one-fifth came under less formal ones. For them, formalization by way of registering with the DFO meant that they would be tied up to the DFO in connection with forest management; a kind of formal recognition by the agency concerned.

### **Extension and Communication in CFDP**

The analysis of the strength in three types of linkage pattern (FUG-FUG, FUC-FUG and government-FUG), showed that the majority of the respondents had strong FUG-FUG (64.5 percent) as well as FUC-FUG (58.5 percent) linkages. However, a little more than one-half of them had weak government-FUG linkage.

The 'radio programme' was preferred to 'printed matters' by more than three-fourths of the respondents for seeking information. While a large majority of respondents also listened to radio programme, only about one-fifth of them reported utilizing printed materials. Similarly, nearly three-fourths of the respondents chose 'Rangers or Assistant Rangers' in preference to 'Forest Guards' as a medium for seeking forestry related information. In terms of training, only a small minority of the respondents had undergone practical training in forest management. There were only a few of them who had participated in organized tours. In fact, a significant majority of the respondents felt the need for such training. About one-tenth of the forest users



reported that they did not grow trees in their private land due to lack of skill and knowledge required for tree growing.

### **Situational Aspects of Participation**

About one-third of the respondents described physical setting as highly favourable for their participation in the CFDP activities. Although about 41 percent of the respondents did not appear to have faced any problems, one-fourth of them reported discomfort in terms of physical mobility; long distance to travel during rainy and summer season in the hill terrains.

According to a majority (67 percent) of the respondents the condition of forest just a few years ago was miserable. However, they reported that the situation had been improving gradually with the implementation of the present community forestry programme. About one-tenth of them stated that the forest condition in their area had not been improved yet. A little more than one-fifth of the respondents did not know whether the forest, in their proximity, was either in good condition or ever improving.

By and large, the respondents were also found to be quite optimistic of the present CFDP. In terms of intensity, only about one-fifth (21 percent) of them were highly optimistic, while 17.5 percent were less optimistic. A small majority (60.5 percent) of the respondents were satisfied with the performance and progress of the CFDP. Nevertheless, nearly 40 percent of them expressed discontent relating to benefit sharing, performance of FUG/FUC, and the implementing agency.



### **Extent of Participation in the CFDP**

Overall, the majority of the respondents irrespective of their socio-demographic were concentrated at the medium level of participation in decision-making, implementation and benefit sharing activities. The extent of participation examined along other factors considered in the study also resulted in the medium intensity of participation. Only a small minority were involved at either high or low level of participation. In numerical terms, thirty percent was the largest proportion of respondents who had high level of participation at the implementation stage. The proportion of respondents at high level of participation in the case of decision-making and benefit sharing constituted 23.5 and 21 percent respectively.

### **Factors Associated with Participation**

Among the independent variables examined to see their relationship with the dependent variable participation, 22 variables showed a significant relationship with participation.

The factors such as ethnicity, organizational membership, empowerment, decentralization, handover of forests, FUC-FUG linkage, FUG-FUG linkage, government-FUG linkage, radio programme, printed materials, awareness, physical setting and satisfaction were found to be the more important ones in the context of community forestry. These factors were significantly associated with participation in decision-making, implementation and benefit sharing.

The factors that showed their significant association with only two activities, that is, participation in implementation and benefit sharing were: educational status, residential status, fuelwood supply and fodder supply from private source. Of these four factors, except for residential status, the relationship was negative. Similarly, administrative support, mode of formalization and experience with development intervention were significantly associated with participation in decision-making and implementation. Occupational status had a significant relationship with only participation in implementation.

A set of 18 significantly associated variables accounted for about 68 percent of the variance explained in participation in decision-making. However, of the 18 factors, only five of them contributed significantly in explaining the variance in the level of participation. These variables, in order of their relative strength, were namely, empowerment, awareness, ethnicity, FUG size and organizational membership.

Similarly, a set of 21 factors that had a significant relationship with participation in implementation indicated about 47 percent of the variance in the level of participation as combined effect. Of these 21 factors, only four factors contributed significantly to explain the variance in the level of participation. These factors were ethnicity, empowerment, radio programme and residential status, in order of intensity of their contribution to explain the variance.

In the case of benefit sharing, 34 percent of the variance in participation was explained by a set of 18 factors. Fuelwood supply from private source,

printed materials, FUC-FUG linkage, satisfaction, handover of forest, decentralization and organizational membership were the significantly contributing factors, in order of their relative importance, in explaining the variance in the level of participation in benefit sharing.

## **Conclusions**

### **The Forest Users and Forest Management**

Forest users formed a heterogeneous group in terms of their socio-economic and demographic characteristics. This social group was heavily dependent on tree products to meet their basic fuel and fodder needs. The major sources of these products were the national forests and community forests. The tree products were largely procured by female members of the household. However, female household members were under-represented in both the FUC as well as the FUG, thus indicating gender difference in community forestry in terms of role and relationship between men and women. Although the forestry policy advocates integration of women in community forestry programmes, the finding of this study shows that it is yet to materialize.

In general, the local inhabitants perceived the current CFDP as an appropriate approach for the management of forests with involvement of the local community, despite some deficiencies associated with it. Satisfaction expressed by a majority of the FUG members, provision of shifting of management authority over the forests from the government to the FUG rather than to any other units within the government administration and improved

situation of forests were some of the significant aspects indicating the present CFDP as a right approach. The deficiencies in the approach included inadequacy of government's support to the FUGs in making an operational plan, absence of afforestation activities in some areas, lack of financial support to some FUGs and lack of technical assistance in the establishment of forest nursery. Hence, the need for government's cooperation to the FUGs in connection with community forest management was apparent.

The feeling among the forest users for the necessity of handover of forests to the user groups was very strong. To them, having the forests handed over to their FUGs would mean the legal authority to protect and utilize forests. The absence of such an authority appeared to have caused unsecured in them. This is because tendency to participate actively among those forest users who already had the forests handed over to their groups was also conspicuous. A number of FUGs have not had the forests handed over to them. The low level of participation among the members of FUG could partly be attributed to this fact.

### **Organizational Structural Elements of FUG**

In fact, 'general assembly' was the kind of decision-making pattern that was perceived as being most influential as well as preferred by most of the FUG members. However, in some cases, the forest users were still with the perception that their group had been following the pattern of decision-making other than the one preferred by them. Although a majority of members perceived their organizations as of the optimum size in terms of the number of members, some of them perceived as being either too big or too small. The

forest users coming from some FUGs had not been able to register their groups duly with the District Forest Office. Almost all the FUG members indicated the need for their FUGs to be in more formal mode rather than being informal or less formal one. They also meant that the more formal their FUGs, the more accountable the group members held for their responsibilities.

### **Communication and Extension in CFDP**

A majority of the forest users had relatively frequent interaction among themselves and with the office bearers of the FUC. But their interaction with the government forestry personnel was not so frequent. Most forest users preferred 'radio programme' as a medium of communication to 'printed matters'. They also utilized this medium more often for seeking information. Similarly, 'Rangers and Assistant Rangers' were preferred to 'Forest Guards' as the source of information. Most forest users had not undergone any training in forest management and related aspects. A strong feeling indicating a need for such training among forest users was very explicit.

### **Situational Aspects of Participation**

The physical condition in the study area did not seem to be favourable to all of the FUG members for them to participate in forest management activities. Overall, the local people had an optimistic view towards the current community forestry programme. This was indicated by their favourable attitude towards the programme. Although the majority of the local people appeared to be satisfied with the current community forestry programme, there were still a good number of them who were not able to derive satisfaction from



their participation. Dissatisfaction on the part of the participants could be one of the reasons for low level of participation.

### **Extent of Participation and Associated Factors**

It appears that the attempt to achieve people's participation have proved to be a limited success. The majority of the forest users were involved in forest management activities only moderately. The fact that a majority of the FUG members' medium and/or low level of participation in decision-making, implementation and benefit sharing activities suggests that the total potential human resources have yet to be mobilized to achieve still greater extent of participation.

The level of participation in decision-making and benefit sharing of those forest users without secondary occupation tended to be higher. There was also a tendency for a higher level of participation among original residents in the case of implementation.

Adequate government's support to FUGs, handing over of forests, formalization of FUGs, better contact and interaction of FUG members with their peers and FUC members, better exposure of FUG members to mass media like radio programmes and printed materials and satisfaction from involvement appeared to be the important factors that tended to enhance the level of participation in decision-making, implementation and benefit sharing.

The study comes to a conclusion that the FUG members coming from Tamang ethnic group tended to have a higher level of participation in CFDP activities. An increasing trend in the level of participation among those forest



users who had higher level of awareness of their group activities and who felt the physical condition more convenient for participation was also notable.

It appeared as if the level of education had nothing to do with the level of participation in implementation, where people contribute their labour and materials. This fact held true even in the case of participation in decision-making and benefit sharing, thus leading to a conclusion that formal education was not one of the main characteristics of potential participants.

The significant and positive relationship of participation in decision-making, implementation and benefit sharing with organizational membership, empowerment, decentralization, government linkage and experience with development intervention reflects the importance of both the people's own collective commitment as well as the government's supportive role. On one hand, pluralistic membership in social organizations, contact with government personnel and right kind of attitude are important factors on the part of the FUG members. On the other hand, it is on the part of the implementing agency that more decentralized administrative approach and providing opportunities for FUG members to involve in the programme are important aspects in fostering the level of participation.

From the significant and negative relationship between the FUG size and level of participation it can be concluded that the intensity of involvement of forest users is likely to decline with the increase in number of members in the FUG. The significant and negative relationship between the fuelwood and fodder supply from private sources and participation in implementation and benefit sharing indicates a tendency to increase the extent of participation of

those forest users who have a limited fuelwood and fodder supply from own source. In other words, the forest situation in terms of access to tree products have bearing on the level of participation.

The significant contribution of certain factors such as empowerment, awareness, FUG size and organizational membership, in the explanation of variance in the level of participation in decision-making leads to a conclusion that these factors are important determinants of FUG members' participation. This shows that the level of participation tends to increase with increased empowerment of FUG members, with higher level of awareness in them about their group activities, with the optimum number of members in the FUG and with pluralistic organizational membership.

As in the case of participation in decision-making, among a set of 21 factors, the 'empowerment' aspect appeared to be the most significant one indicating its influence on the level of participation in implementation. The other contributing factors were radio programme and residential status. It can, therefore, be concluded that strengthening the power base at individual level, radio programme on community forest management, and motivation of migrant FUG members are important aspects to be considered for enhancing the level of participation.

In the case of participation in benefit sharing, of the 18 associated factors, fuelwood supply from private source appeared to be the most important one. This means that the pressure on community forests or national forest could be reduced as people become self-sufficient in terms of tree products. The other important factors that significantly influenced the level of

participation in benefit sharing included linkage with FUC, satisfaction, printed materials, handover of forest, organizational membership, and decentralization. Thus, the study concludes that participation is likely to increase in situations where: forest users are in more frequent contact with FUC members, they derive more satisfaction from FCDP, they are more exposed to printed materials for information, forest is handed over to FUGs, FUG members have pluralistic organizational membership and the FUGs have legal forest management authority.

### **Implications and Recommendations**

The research findings presented in this study basically carry implications for two different but interrelated institutions: the government (Forest Department) and the local organization (FUC/FUG). The study also presents certain recommendations for future research.

As found in this study, the level of participation of the majority of the forest users was medium and/or low in decision-making, implementation and benefit sharing. This clearly indicates the obvious need for more concerted actions to improve the quantity as well as quality of participation at all levels.

The heterogeneous socio-demographic characteristics of forest users appeared to have had a profound influence on the extent of participation. It is obvious that the location specific socio-economic settings have to be utilized as bases for effective community forestry programme planning. Taking into account the significant association of ethnicity, occupational status, residential status, family size and organizational membership with participation, it is

desirable that every effort should be made to mobilize the FUG members from migrant family, smaller family and other prominent ethnic groups for more active participation. It is reasonable that members who had been absent for a long time, or could not afford to participate and did not show interest, be replaced in order to keep FUGs active. It is necessary to avoid just symbolic representation. Instead genuine participation among forest users should be encouraged. This is because overall effectiveness of an FUG is dependent on the performance of its members. It is, therefore, recommended that a monitoring system be established within the FUG for periodical appraisal of participation performance of its members. The implementing agency's role in establishing such monitoring system could be of pivotal importance.

The gender differences were apparent in community forestry. As found in this study, women were as much a part as men of the forest eco-system. Despite the policy to integrate women and the fact that women were major actors in the procurement of forest products, it is irony that they were kept out of the domain of the decision-making process. In considering the role of women in forestry, it is recommended that much closer attention be paid towards gender-sensitive planning and its materialization for the integration of women in community forestry.

The institutional context of community forestry appeared to be not adequately conducive to the implementation of CFDP. Administrative support provided to FUGs was reported to be not adequate. Some FUGs were yet to be registered with the DFO. The handing over procedure being followed was still the same way as in the past when community forests were designated as PF

and PPF. Despite the existence of decentralization law, it appeared that this law had not been materialized. This shows an inconsistency in the policy principles and the practices being followed. There was a strong consensus among forest users that the handing over of forests should be the first and foremost task the DFO ought to perform in order to ensure security of ownership of the forest by the FUGs. Handing over of forests can be an impetus for the forest users to drive towards more effective management and protection of forests. The findings indicate the need for a strong political commitment on the part of the implementing agency. It is also for the implementing agency to be consistent in the principle and practice in relation to policies. In this regard, the DFO's effort by making its field staff readily available to assist FUGs in developing an Operational Plan would enhance the extent of participation. This is because under the new forest policy, an Operation Plan is a requisite for the FUGs to get registered with the DFO as well as to get forests handed over. However, achieving self-reliance should be continuous effort by the FUG for its long term sustainability and to reduce dependence on external assistance.

It was observed that the local people were heavily dependent on forests to meet their household and farm needs. The dependence of the people on the forests resulting in deforestation is inevitable at the present moment. The study also revealed that only a small minority of people in the community had trees planted in their own land. There was a significant and negative relationship between participation and fuelwood and fodder supply from private source. It is, therefore, recommended that in an effort to develop forests, encouraging local people to develop private forestry may be a desirable step to reduce



the pressure on community forests and national forests. Creating an atmosphere conducive to such an undertaking is imperative. Above all, availability of land for establishing private forestry is crucial. As indicated in this study, many people had not planted trees because of the lack of land despite their keen interest. Hence, aside from technical advice and management support by the government, allocating barren land to the households interested to grow trees on lease-hold basis could serve as a mechanism to induce private forestry.

In the present study, different levels of participation among members representing FUGs with different structural features have been well illustrated. The structural elements preferred by FUG members included 80 to 100 members, decision-making by assembly and more formalized structure, to form an ideal local organization. That is why Hall (1987) aptly characterized the structure of an organization as dynamic. This dynamic nature of an organization implies the need for the structural adjustment in those FUGs that lie outside the frame of an ideal FUG. This is because, different structural elements of organizations are effective under different situations. In other words, the same structural elements of an organization may not be effective every where. It is, therefore, recommended that the appropriateness of structural elements be taken into consideration in forming any FUG in order for it to be more productive.

Under the extension system, radio as a source of information was preferred and utilized by a majority of the forest users. Moreover, this variable was also significantly associated with participation. This amplifies the need for



popularization of radio programme on forest management in a more intensive manner among forest users. Pictorial printing materials could also help in making wider publicity of the community forestry programme. A majority of the members of FUG had weak government linkage. This finding highlights the need for the development of a mechanism that would facilitate interaction between forestry personnel and forest users. One way could be by organizing the visits of rangers and assistant rangers to FUGs on a regular basis. Moreover, these staff of the DFO, as a source of information, were also preferred by the forest users. A significant majority of the forest users also felt the need for training in forest management. In view of training as a tool for creating awareness, improving skills and bringing desirable changes in attitude, it is recommended that the training component be integrated as a part and parcel of CFDP, rather than just an occasional programme.

A significant and positive association between participation and empowerment suggests that for effective participation, a power base at individual level is imperative, besides empowering their organizations. This means that people's capabilities to participate must be strengthened by providing opportunities to each and every individual FUG member. Creating conditions for socio-economic empowerment of those who are at the bottom of the social structure through providing opportunities for enabling them to participate is necessary. One way to empower could be by not placing entirely the decision-making power in the hands of executive members of FUC or those so-called influential few. Over-domination of the FUG by FUC members or a few influential should be avoided as this may eclipse the scope for other members to participate. This is because some individuals are likely to be

excluded where the local organizations tend to be dominated by a minority few. In this regard, government forestry personnel's supervision over FUC/FUG can be of valuable contribution.

The significant and positive relationship between participation and experience with development intervention is the indicative of the fact that, despite an ugly impression of the earlier programme, there seemed a general willingness on the part of the people to cooperate with the current forestry programme. Therefore, the role of the people and their importance in forest management should be acknowledged in framing the policy and designing the programme. This implies a need to understand the forest users' expectation from and perception about the development intervention in order to avert distrust and misconception that might emerge between the beneficiaries and the implementing agency. Participatory programme planning can be a mechanism to understand the general feeling of the beneficiaries concerned. Specifically, 'participation through creativity' advocated by Johnston (1982) as one of the levels of participation becomes more relevant in such circumstances.

Dissatisfaction expressed by a considerable proportion of the FUG members from their participation has three implications. The first is that the implementing agency need to perform its task more conscientiously. Second, the executive members of forest user committee need to play effective leadership roles to involve people in CFDP activities. Third, there is a need to develop creativity and accountability on the part of the FUG members themselves. The finding also carries a theoretical implication, reflecting Klandermans's (1984) 'value expectancy theory' which explains that the

willingness to perform is influenced by the level of reward expected and satisfaction achieved. Therefore, in material sense, satisfaction could also be derived from distribution of benefits on equitable basis that is agreeable to most FUG members.

The way, by which forest users were involved did not seem to be an effective mechanism. Following Dusseldorp (1981), the type of participation, which was although voluntary and organized, yet it was free and spontaneous. In view of the low or medium level of participation among forest users as found in this study, it is recommended that a voluntary and organized, but coerced as well as intensive type of participation should be adopted as a mechanism to involve forest users. One way of getting people involved could be by applying sanctions. The absence of sanction, as Hardin (1968) argues, will inevitably lead to overuse and degradation of resources. As citizen participation theory asserts people participate for getting benefits; imposition of rules that would deprive non-participants of benefits could push forest users towards more intensive participation.

### **Recommendations for Further Research**

Research is still needed to explore more about participation. The present study covered only 10 FUGs from three VDCs and results of this study cannot be generalized beyond the locale of the study. For generating more genuine information base for the use of planners, policy makers and programme implementers, there is an obvious need for further participation research on a representative national sample. Therefore, a study covering more FUGs in other parts of the country using similar variables would be helpful to further

validate the present findings. A few more replications of the study of this kind would provide more precise explanation of underlying factors that influence the extent of participation.

The instruments developed to measure respondents' perception about empowerment, decentralization, experience with development intervention and extent of participation in decision-making need further refinement. The use of such instruments with more statements would measure the variables with greater precision.

Information pertaining to institutional factors generated in this study are from the perspective of local communities. It would be of interest also to generate such information base from the perspective of the personnel working for the implementing agency. This would help substantiate the findings that have greater relevance to planners and policy makers.

Additional research using more variables within the present study setting is also needed in the light that the variables included in the present study could not explain more than 68 percent variance in the dependent variable (participation). More studies undertaken in this direction would help identify other contributing factors.

This study has used interview schedule as the main tool for gathering data, which were more quantitative nature. Blending qualitative and quantitative research methodologies would have been of great utility in terms of encountering the weaknesses associated with one particular methodology, that is, survey method. Integrating qualitative data more intensively in order

to fortify accurate interpretation of variables should be an attempt in future research undertakings.

To state a final remark, community forestry as one of the forest development approaches will lead to considerable success, if it acknowledges the creative initiatives of the people as an important source of development. This necessitates the orientation of community forestry more towards development of forest resources through sustainable human development, rather than merely production for economic gains.

The core of the community forestry is people's participation and the fact that participation will not occur in an organizational vacuum cannot be overemphasized. Within the organization, appropriateness of its structural elements should be a central concern in order for it to be functionally productive. Besides, empowerment at individual level forms an important aspect, as it is logically tied up with principles such as equity, rights and justice.

Community forestry programme being agency-sponsored, a strong political commitment on the part of the implementing agency to be more pragmatic in adopting policies to implement a people-centred development programme is imperative. A Forest User Group as a people's organization outside the government administration in the community forestry is indispensable. At community level, the FUG could act as a vehicle for forest development, provided it is given legal management authority, and adequate technical and the necessary administrative support by the sponsoring agency.



A radical departure from the conception of 'authoritarian' towards more 'people-centred' is a necessary trend to the long term success of the community forestry programmes. Hence, gaining momentum to foster such a trend should be a continuous effort by all the bodies associated with community forestry development programmes.



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## APPENDIX

### (INTERVIEW SCHEDULE)

Respondent No \_\_\_\_\_ Date of interview \_\_\_\_\_

Interviewer's name \_\_\_\_\_

Name of Village Development Committee \_\_\_\_\_

Name of Forest User Group \_\_\_\_\_

#### I: Socio-demographic Information

1. Age \_\_\_\_\_ (years)      2. Gender: Male / Female
3. Ethnicity/caste \_\_\_\_\_
4. Length of residence at the present place \_\_\_\_\_ (years)
5. Original residence (Name of birth place) \_\_\_\_\_
6. Marital Status: Married / Single / Others (specify) \_\_\_\_\_
7. Family: (i) Type: Nuclear / Joint / Extended  
(ii) Size: (Number of family members) \_\_\_\_\_
8. Level of education: Illiterate / Literate.  
If, literate, the number of years of formal schooling \_\_\_\_\_
9. Main occupation:      (a) Farming      (b) Service  
   (c) Business      (d) Caste occupation  
   (e) Labourer      (f) Others (specify) \_\_\_\_\_
10. Secondary occupation, if any \_\_\_\_\_
11. Herd size: No of      (a) Cows \_\_\_\_\_ Calves \_\_\_\_\_  
   (b) Buffaloes \_\_\_\_\_ Calves \_\_\_\_\_  
   (c) Oxen \_\_\_\_\_ (d) Sheep/goats \_\_\_\_\_  
Total No \_\_\_\_\_
12. Annual Family Income (gross):  
   (a) Rs. \_\_\_\_\_ (from main occupation)  
   (b) Rs. \_\_\_\_\_ (secondary occupation)  
Total Rs. \_\_\_\_\_



13. Land Holding Status: (a) Self cultivated \_\_\_\_\_ (ha)  
 (b) Rented in \_\_\_\_\_ (ha)  
 (c) Rented out \_\_\_\_\_ (ha)  
 Total Area \_\_\_\_\_ (ha)
14. Are you a member of any other organizations? Yes/No  
 If yes, give the name(s) of organization(s) and type of membership
- | <u>Name of organization</u> | <u>Membership Type</u> |
|-----------------------------|------------------------|
|                             | (Past or Present)      |
| (a) _____                   | General/Office bearer  |
| (b) _____                   | General/Office bearer  |

## II: Forest Management and Utilization

15. Please tell your experience about the forest management system before the introduction of community forestry programme (PF and PPF). Points to elaborate: Who (people and institutions involved), how (in terms of utilization and protection of forests, rules and regulations etc.)
- \_\_\_\_\_
- \_\_\_\_\_
16. How do you compare the community forestry programme (when community forests were known as Panchayat Forgets and Panchayat Protected Forests) with the present one (after April, 1990) in terms of forest management and institutions (government and local organizations) involved.
- \_\_\_\_\_
- \_\_\_\_\_
17. Please mention, what are the aspects that you like most in the current community forestry programme?
- \_\_\_\_\_
- \_\_\_\_\_
18. What are the deficiencies that you notice in the present community forestry programme?
- \_\_\_\_\_
- \_\_\_\_\_





19. (a) Has your FUG been handed over with the forest from the DFO?  
Yes / No

(b) Do you think that the handing over of forest to FUGs is necessary?  
Yes / No, and Why (give reasons)?

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20. Please state what are the farm and household purposes for which you use forest products.

(A) Household purposes: (a) Cooking foods  
(b) Heating houses, food items  
(c) Roofing  
(d) Others (specify) \_\_\_\_\_

(B) Farm purposes: (a) Cooking animal feed  
(b) Fencing of farm  
(c) Construction, repair and maintenance of animal shed  
(d) Making handle of farm-tools and implements  
(e) Compost making  
(f) Others (specify) \_\_\_\_\_

Note: (Type of forest products: Woodsticks, timber (poles), leaves)

21. Who, in your family, does the collection of following items:

Item	Collector	Total hours in a day	Total No. of such days in a month	Total No. of such months in a year
Fuelwood:	Male Female			
		Total hours spent in a year	_____	
Fodder:	Male Female			
		Total hours spent in a year	_____	



### III: Participation in Various Stages of CFDP

#### 22. Participation in Decision-Making

Please state the extent of your involvement in the following activities of your FUG in last 12 months.

Activities	Always	Most of the times	Some-times	Never
(a) Attendance at general meetings.	3	2	1	0
(b) Participation in discussion by asking questions and offering suggestions.	3	2	1	0
(c) Involvement in problem or need assessment and setting priorities of problems or needs.	3	2	1	0
(d) Involvement in making plan of work/action	3	2	1	0
(e) Participation in decisions regarding programme implementation	3	2	1	0
(f) Participation in decisions regarding distribution of benefits.	3	2	1	0
(g) Participation in developing operational plan.	3	2	1	0
(h) Participation in decisions regarding managing conflicts in the group.	3	2	1	0



Activities	Always	Most of the times	Some-times	Never
(i) Participation in delegation, representing the group to dialogue with project officials.	3	2	1	0

Scoring System:

Always	: (3) = all the time whenever happened.
Most of the times	: (2) = half or more than half of the total times happened.
Sometimes	: (1) = less than half of the total times happened.
Never	: (0) = No participation.

(Indicate the type of participation in each case. For example, whether voluntary (Free / coerced) / forced by law / socio-economic condition, direct / indirect, organized / unorganized, others (specify) \_\_\_\_\_

23. Participation in Implementation

(A) Labour Contribution

Did you contribute your physical labour for the following activities?

- (a) Pre-planting  
(Fencing the forest, layout, demarcation, nurseries establishment) : Yes / No
- (b) Planting  
(Digging of pits, Planting saplings) : Yes / No
- (c) Post-planting  
(Protection of forest, forest guarding, watering the plants) : Yes / No





## (B) Material Contribution

Did you contribute any materials (tools, implements, baskets, rope, measuring tape etc.) for the following activities?

- (a) Pre-planting activities : Yes / No  
 (b) Planting activities : Yes / No  
 (c) Post planting activities : Yes / No

Scoring system: Yes = 1, N = 0

(Indicate type of participation: whether voluntary (Free / coerced) / forced by law / socio-economic condition / direct / indirect organized / unorganized)

If no, what are the reasons for not contributing?

## 24. Participation in Benefit Sharing

Please state the types of benefits that you received from your participation in community forestry programme

## (A) Material benefits

- (a) Fuelwood : Yes / No  
 (b) Fodder : Yes / No

## (B) Non-material benefits

- (a) Selected for participation in training programmes related to rural (forest) development : Yes / No  
 (b) Recognized as a respected person in the community: : Yes / No  
 (c) Gained knowledge/skills regarding tree growing : Yes / No  
 (d) Learned the value of forest conservation in maintaining ecological harmony : Yes / No

Scoring system: Yes = 1, No = 0

## 25. Do you have any comments on the distribution of benefits:



#### IV: Factors Related to Participation

##### 26. Institutional Factors

###### (A) Politico-administrative Support

To what extent do you feel that your group has been receiving support and assistance in terms of delivery of administrative services and resource commitment from the government?

(a) Active support   (b) Support   (c) Inadequate support

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###### (B) Decentralization

Please state the degree of your agreement with the following statements:

SA      A      DA      SDA

- (a) It is not necessary that the users group be vested with legal authority to ensure their participation in project activities, rather it should conform to the rules and regulations set by the government agency
- (b) Transferring legal authority to user group by the government would make group members feel more responsible as well as committed to participation
- (c) Lack of authority on the part of user group would lead it to non-cooperating attitude towards the implementing agency ad development programme
- (d) Effective participation of the people cannot be achieved without the legal authority provided to the user group in making decisions and plans related to development activitie





SA      A      DA      SDA

- (e) People will be more willing to participate if the government authority exercise more control over the user group in carrying out group's activities
- (f) The user group should simply follow the policies, decisions and directives that come from government organization even if these do not suit to the former's programmes and activities
- (g) The community's involvement in activities of development programme should be mediated by the government policy rather than by their own organization's rules and regulations
- (h) The community will be more willing to participate in the programmes designed by the government officials alone without the consent of latter's organization

Scoring system:  
SA (Strongly agree) = 4, A (Agree) = 3,  
DA (Disagree) = 2, SDA (Strongly disagree) = 1  
  
Reverse scoring for negative statements

To what extent, has your group been able to fulfil whatever responsibilities that have been transferred by the government?

- (a) To a greater extent, because \_\_\_\_\_
- (b) To some extent, because \_\_\_\_\_
- (c) To a lesser extent, because \_\_\_\_\_
- (d) Not at all, because \_\_\_\_\_



(C) Empowerment

Please state the degree of your agreement with the following statements:

SA    A    DA    SDA

- (a) The development agency should conform to the needs and concerns of the people, if participation of the latter is considered essential for the success of project.
- (b) It is not necessary that the project should have representation of various socio-economic and interest groups in decision-making
- (c) There cannot be real participation of people if they do not have a say in policies and decisions related to project
- (d) The people would be willing to cooperate with the development project even if they are not granted any legal rights over resources
- (e) The people should be given equal opportunity to participate in all project activities irrespective of their socio-economic status ethnicity/caste.
- (f) It is not crucial that in order for achieving wider participation of people, they may be made able to decide upon/take actions on the matters that are likely to affect their lives



SA      A      DA      SDA

- (g) It is essential that the people have their substantive role in the formulation of programme objectives so that they have an opportunity to address their perceived needs and problems
- (h) Participation of only the elites and influential in society is crucial for successful implementation of the project

Scoring system:

SA (Strongly agree) = 4, A (Agree) = 3,  
DA (Disagree) = 2, SDA (Strongly disagree) = 1

Reverse scoring for negative statements

27. Structural Factors

(A) Dimensions of Functions

- (a) How many kinds of functions (activities) has your group been undertaking concurrently?

- (i) one : Forestry alone  
(ii) two : Forestry + \_\_\_\_\_  
(iii) three : Forestry + \_\_\_\_\_ + \_\_\_\_\_

Note: Functions: irrigation / livestock / improved seeds  
fertilizer, credit etc.

- (b) Do you think that your group has been productive / effective with the number of activities you mentioned. Yes / No, and why?

\_\_\_\_\_

(B) Mode of Formalness

- (a) Has your FUG been recognized as the legal body by the government to manage and utilize the forest land?

Yes / No. If yes, since when (date) \_\_\_\_\_

- (b) Do you feel that recognition of the FUG by the government is deemed necessary? Yes/No. and Why?

For example: for legal authority, for legal security, to make group members responsible or committed, any other (specify) \_\_\_\_\_

- (c) Give your opinion about a FUG to be formal/informal in terms of effectiveness/productivity
- 

(C) Decision-making Structure

- (a) Which decision-making structure, do you think, is influential in your group regarding matters such as:

- |  |     |     |     |
|--|-----|-----|-----|
| (i) Imposing sanctions                   | (1) | (2) | (3) |
| (ii) Nomination of delegates             | (1) | (2) | (3) |
| (iii) Implementation of group activities | (1) | (2) | (3) |

Note:

- (1) The group leader/the most influential person in group  
 (2) The office bearers / few influential members  
 (3) General assembly (executive + general members)

- (b) Of the above mentioned decision-making structure, which one do you prefer in order for making decisions in your FUG?

(1)      (2)      (3)

(D) Size of Organization

- (a) How many members are there in your FUG? \_\_\_\_\_

Male : (FUC members) \_\_\_\_\_ (FUG members) \_\_\_\_\_

Female : (FUC members) \_\_\_\_\_ (FUG members) \_\_\_\_\_

- (b) What do you think of your group size in terms of complications in handling the group to be productive?

- (i) Very large    (ii) Large    (iii) Optimum  
 (iv) Small    (v) Very small

- (c) In your opinion, what should be the size (number of members) of an FUG in order to be more effective in performing development task like forest management, and why (give reasons)?
-



## 28. Linkage Factors

(A) Are you in interaction with:

If Yes (frequency)

- |                                |          |     |     |
|--------------------------------|----------|-----|-----|
| (a) Office bearers of your FUG | (Yes/No) | (1) | (2) |
| (b) Your / other FUG members   | (Yes/No) | (1) | (2) |

Note: (2) Frequently (1) Sporadically (0) No (never)

If no, give the reasons for not having interaction (each case)

(B) Are you in interaction with:

If Yes, (frequency)

- |  |          |     |     |
|--|----------|-----|-----|
| (a) Forest Guard/Nursery Man                             | (Yes/No) | (1) | (2) |
| (b) Ranger/Assistant Ranger                              | (Yes/No) | (1) | (2) |
| (c) Assistant Forest Officer/<br>District Forest Officer | (Yes/No) | (1) | (2) |

Note: (2) Frequently (1) Sporadically (0) No (never)

Have you confronted any problem in contacting or interacting with above mentioned persons? Yes/No.

If yes, please state the type of problems that you experienced (each case)

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## 29. Situational Factors

(A) Physical Setting

What is your opinion about of the physical setting (terrain, rivers, weather other natural features etc.) in terms of difficulty or ease in involving yourself in project activities?

- (a) Highly favourable (b) Favourable (c) Unfavourable

(B) Forest Situation

- (a) What do you think of the forest situation in your village compared to last 8 to 10 years?

- (i) Declining (ii) Improving (iii) No change
- 
- (iv) No idea (not aware)

(b) Have you been growing any trees in your land?

Yes/No. If yes, to what extent do the tree products from your own land fulfill your following needs ?

<u>Tree products</u>	<u>Other Sources</u>
(i) Fuelwood: ____ days/weeks/months in a year	_____
(ii) Fodder: ____ days/weeks/months in a year	_____

Note: Other sources; community forest, national forest  
local market: vender/fuelwood depot

If no, why:

- (a) Do not have enough land to grow trees
- (b) Growing trees affect the growth and production of main crops
- (c) Do not have skill and knowledge required to grow trees
- (d) Tree products are still available as free goods from the forest
- (e) \_\_\_\_\_

(C) Previous experience with development interventions

Please state the degree of your agreement with the following statements:

SA    A    DA    SDA

- (a) Often, the Development projects intend to fulfill more of their official formalities rather than making efforts towards fulfilling the needs intended beneficiaries
- (b) It must taken for granted that development programmes, as such, are being introduced with the intention of providing benefits to the people
- (c) Failure of an earlier development project does not necessarily mean that the project at hand will also be a failure one

SA    A    DA    SDA

- (d) As most past development programmes have hardly been any beneficial to the community and its people, it cannot be expected that the new undertaking is going to produce a positive effect
- (e) Because development programmes have hardly produced any benefits to the people in the past, it is obvious that they would feel reluctant to extend their cooperation towards such programmes
- (f) People should cooperate with the development programmes irrespective of whatever have been the impact of such programmes in the past

Scoring system:

SA (Strongly agree) = 4, A (Agree) = 3,  
DA (Disagree) = 2, SDA (Strongly disagree) = 1  
Reverse scoring for negative statements

(D) Satisfaction

Please express your feeling about the extent of satisfaction or dissatisfaction from your participation in CFDP activities. Why (give reasons):

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30. Extension and Training

(a) To what extent are you aware of the activities of your FUG?

- (i) All of them                      (ii) Most of them
- (iii) Some of them                (iv) None of them

(b) Are you aware of radio programme on 'Forest Conservation'?  
Yes/No. If yes, please tell the day and time of broadcast

(i) Day \_\_\_\_\_ (ii) Time \_\_\_\_\_

(c) Do you know any printed materials (news paper, bulletin, magazine, poster etc.). Yes/No.

If yes, what are they: \_\_\_\_\_  
\_\_\_\_\_

(d) Of the following extension agents, whom do you prefer as a channel of communication to seek information about CFDP?

(i) Rangers / Assistant Rangers (ii) Forest Guard / Nursery men

(e) Have you undergone any training on forestry in last two years.

Yes/No. If yes, please give the following particulars:

<u>Kind of training</u>	<u>Duration</u>	<u>Place</u>	<u>Organizer</u>
(i) _____	_____	_____	_____
(ii) _____	_____	_____	_____

If no, do you feel that you need to undergo such a training?  
Yes/No.

31. Please give your comments / suggestions / grievances that you think would aid in the overall improvement of the project's performance, enhancing effective people's participation, and solving community's problems related to management of forest resources.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## BIOGRAPHICAL SKETCH

The author was born on 11 December, 1955 in Nepal. He received his secondary and high school education from Patan High School, Lalitpur Nepal. In 1976, he received the USAID scholarship to pursue a Bachelor degree in Agriculture and Animal Husbandry at GBP University of Agriculture and Technology, India.

Upon his return to Nepal in November 1979, he was employed as an Assistant Lecturer by the Institute of Agriculture and Animal Science (IAAS), Tribhuvan University. He earned his Master's degree in Extension Education from Haryana Agricultural University, India in January 1988 under the USAID grant. Soon after this, he resumed his profession at IAAS and in 1990, he was promoted to the position of lecturer.

To his credit, he has published several articles in journals. He is also a co-author of a text book in Extension Education, and main author of two Practical Manuals; Extension Education (in Nepali vernacular) and Agricultural Communication.

Mr. Joshi has been awarded a Medal (*Mahendra Bidya Bhushan*) for his outstanding performance in the Masters studies. He is also a recipient of the Winrock International Fellowship to pursue doctoral degree at Universiti Pertanian Malaysia. While with IAAS, he also held the positions of Hostel Warden, Extra Curricular Activities Chief, Member of the Task Force Committee on Women in Farming Systems, and Secretary - Subject Matter Committee. He is currently at UPM as a doctoral candidate.

