

Chapter 1

INTRODUCTION

Objectives of the Study

The basic aim of this study is to provide a systematic overview of forest use and management in the Eastern Hill Region, with special reference to user groups.

The specific objectives of the study are as follows

- i. To review the structure, function, and sustainability of forest user groups (FUGs) in three hill districts - Dhankuta, Sankhuwasabha, and Ilam of the Eastern Development Region (study area) - with special focus on (a) the socioeconomic characteristics of user groups; (b) identification of users and the formation process of user groups, particularly origin, history, and membership structure; and (c) institutional attributes of FUGs, particularly resource allocation rules, distribution of benefits by users, and institutional mechanisms for resolving conflicts, particularly the role of leadership at the local level.
 - ii. To explore the sociocultural and biophysical linkages of user groups with special reference to the following: (a) biomass characteristics of the user group forest resources and their adequacy in terms of user requirements; and (b) to what extent the FUG structure is affected by outside areas, institutions, and markets.
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- iii. To determine the extent of peoples' participation and collective action in the management of common pool resources, such as forests, in the study area and to observe whether user group forest management is sustainable or not.
- iv. Finally, to assess the positive/negative determining factors for FUG development in the study areas.

The major area of emphasis will be the communal/non-communal forest resource management systems, particularly after the introduction of community forest user groups in the study areas. This research aims at understanding how some of the factors, such as altitude and climate, district headquarters, market, forest size and biodiversity, user group size, land tenure system, and leadership, are influencing (positive/negative) the management and functioning of FUGs.

This research was undertaken primarily for two reasons (i) the Eastern Hill Region of Nepal is under-represented in forestry research to date, i.e., there is an urgent need to carry out forestry research in this part of Nepal to examine how people use and manage local forest resources for their daily needs. This will help to develop a typology showing commonalities and variations among forest user groups in the Eastern Hill Region. (ii) Many studies (see literature review below) indicate that people's participation is a key solution to effective management of common property resources, e.g., forests. To what extent collective action, or people's participation, for managing forest resources is taking place in the Eastern Hill Region is another theme of the research.

The author believes that this type of research will provide in-depth knowledge of local forest use and management systems and will help to assess the positive/negative determining factors for FUG development in the area also.

Background: Some Basic Issues in Forestry

In recent years, deforestation has become one of the major environmental crises in Nepal. It is said to occur at an annual

rate of 4.1 per cent (1981-85), the highest among all countries surveyed (World Resources Institute 1991). Serious concern is being expressed by many donor agencies who are now extending their activities in community forestry programmes in Nepal to deal with this crisis (Nepal-UK Forestry Project Report 1991; Fisher et al. 1989; World Bank 1990). This crisis has led to the formulation of the Himalayan Environment Degradation (HED) theory, i.e., that population pressure in rural areas, insufficient landholdings, and poverty are linked to massive deforestation (Eckholm 1976; Ives 1987; HMG 1988; NPC 1992). Considering the urgent need to redress the deteriorating forest situation, in 1988 HMG prepared a Master Plan for the development of forestry programmes in Nepal. The main strategy was to promote people's participation in forest resource development and to develop community forest user groups (FUGs) as one of the important alternatives for the forestry sector in Nepal. The Community Forestry User Group Programme is supported strongly by many donor agencies such as the Nepal-UK Forestry Project, the Nepal-Australia Forestry Project, the World Bank, and others.

The Government has already set an ambitious target for forestry programmes in Nepal. It is stated in the Eighth Five-year Plan that, during the plan period (1992-97), 5,000 forest user groups (FUGs) will be formed throughout the kingdom and 2,52,000ha of forest land will be handed over to FUGs (NPC 1992: 225). Therefore, depending upon the availability of forests and their accessibility, the Government has already started distributing forests to the people by forming user groups. According to Haq (1993:71), 1,900 FUGs had been formed in the country by December 1992 and 77,000ha of forest had already been handed over to FUGs. This process is expanding rapidly, like supplying pills and condoms to eligible couples to accept family planning (whether the couple accepts it or not). The Government feels that this will not only tackle the problem of deforestation but will also relieve it from the burden of protecting the forests at large. As people are the real producers and consumers of forest resources, it is believed that they can be good forest managers also. Many experts today echo radical views that people's participation, or community participation, is the ultimate solution to forest management problems in Nepal (Campbell et al. 1987; Tamang et

al. 1992; Gilmour and Fisher 1991; Messerschmidt 1988; Molnar 1981; Fisher et al. 1989). But important research questions remain unanswered: how are **biophysical**, **sociocultural**, **economic**, and **institutional** characteristics shaping the effective functioning of forestry user groups (FUGs) in Nepal? To what extent is collective action or, to use the catch phrase, people's participation, taking place in the management of common pool resources, e.g., forests, in Nepal? In addition, as Fisher notes (1989:11), how does a highly centralised bureaucracy implement a decentralised programme such as community forestry? These are some of the questions which will be considered while analysing the structure and functioning of FUGs in the Eastern Hill Region of Nepal. Before developing a conceptual framework for research, it is necessary to review the pertinent literature on forestry in general and on indigenous forest resource management systems in particular.

Literature Review

The literature on forests in Nepal, concerning problems of deforestation and patterns of forest use and management, is fairly good. In general, the existing literature is of three types. The **first type** presents a scenario in which forests have been severely depleted over the years, therefore urgent protection and management are needed. This type of literature shows an imbalanced relationship between population growth and demands for forest products. The strain on land resources due to the increasing population pressure has contributed to accelerating rates of deforestation and erosion in the fragile mountain ecosystem (Eckholm 1976; NPC 1980; Macfarlane 1976; Banskota 1979; Bajracharya 1981; World Bank 1990). However, Ives and Messerli, in their remarkable book **Himalayan Dilemma** (1989), questioned the theory of Himalayan Degradation and outlined agendas for further research to show the cause and effect sequences prevailing in the Himalayas as a whole.

The **second type** of literature presents an indigenous system of forest resource management, with reference to a particular ethnic group or culture. Acharya (1989) discussed in great detail the *Jirel* (a Tibeto-Burman speaking people in Dolakha district) property arrangements that facilitated direct protection of forest

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resources through symbolic technology, mutual care and sanctions, and mechanisms for redistribution.

Bajracharya (1981) presented a detailed case study of Pangma village in Sankhuwasabha district and concluded that food shortages have forced people to expand agricultural land at the cost of forest resources. While discussing the environmental perceptions of various groups living in the Arun Basin area of Eastern Nepal, Seeland (1993) argued that the Hindu social structure is more destructive in terms of forest use and management than the Tibeto-Burman social structure, e.g., the *Rai*. McDougal (1979) presented an example from the Hongu valley, a traditional *Rai* settlement area in Eastern Nepal where traditional culture is instrumental in preserving the local forest. Fox (1983) argued that overgrazing is undoubtedly the greatest cause of public land degradation in Nepal. He cited the example of Bhogteni village in Gorkha district, Central Nepal.

Molnar (1981) investigated the dynamics of traditional forest management systems in a number of communities in Nepal. She noted some key factors, such as leadership, available resources, relative economic inequality, benefit sharing, sanctions against users, incorporation of women in management, proximity to markets, and a good working relationship between forestry personnel and the community, and concluded that they contribute to the success or failure of traditional forest management systems.

Messerschmidt (1988) presented 10 case studies on community forestry from different communities and argued that indigenous natural forest resource management systems existed historically in the Nepal Himalayas.

The **third type** of literature deals with forest user groups, i.e., how forests are used and managed by the users themselves. Such literature is the latest addition to forestry research.

In the Community Forestry Management Programme in Nepal, the Nepal-Australia Forestry Project (NAFP) is one of the pioneers, not only in implementing the programme but also in publishing materials on community forestry to date. The NAFP began operating in Nepal on an informal basis in 1966 but started

its programme formally in Sindhupalchowk and Kabhrepalanchowk districts in 1978 (Fisher et al. 1989).

Ingles and Gilmour (1989) presented a case study of Dhulikhel *Ko Thuloban* and noted three types of user group in this community forest who were interested in different aspects of community participation.

Jackson (1989) described the evolution of a process for reorienting forestry field staff in Nepal so that community forestry programmes could be run more effectively than before. Fisher et al. (1989) examined the features of indigenous forest management systems in Sindhupalchowk and Kabhrepalanchowk districts. Fisher (1989), in one of his papers, argued that indigenous forest management organisations are usually of recent origin and are not traditional in the sense of being old. In another paper, Fisher (1990) noted the institutional incompatibility which is causing conflict between the Forest Department and the local forest institutions, thus affecting the smooth functioning of forest management systems. Both papers drew examples from Sindhupalchowk and Kabhrepalanchowk districts.

Gilmour and Fisher (1991) discussed the different aspects of community forestry management systems, indigenous and traditional, and analysed the social and political constraints in managing community forestry in Nepal.

Hobley (1990), in her Ph. D. dissertation, argued that, although the objective of social forestry programmes in Nepal is to help women and the poor, the class and patriarchal structures limit their participation and access to and control over social forestry projects. She cited examples from Tukucha and Banskhara *panchayat* of the NAFFP project area.

Mahat et al., in their series of articles (1986a; 1986b; 1987a; 1987b; 1988), argued that deforestation in the middle hills of Nepal is not a recent phenomenon but has a long history. Citing evidence from historical sources and from Kabhrepalanchowk and Sindhupalchowk districts, they stated that the Government's land use policy and subsistence pattern of agriculture were the factors responsible for deforestation in Nepal over the years.

Tamang et al. (1992) collected a series of papers on indigenous management of agriculture and natural resources in Nepal and argued that these indigenous systems existed in Nepal historically, i.e., they reflect genuine people's participation and that they are cost effective also in the context of Nepal.

Chhetri and Pandey (1992) carried out eight detailed case studies of forest user groups in Baitadi and Achham districts in Far-Western Nepal. Shrestha (1993) carried out a detailed longitudinal case study of the *Thakuri* of Diyargaun, Jumla district, showing socioeconomic changes within the group, with reference to nature and the extent of use of natural resources, particularly forests. Campbell et al. (1987) discussed socioeconomic variables regarding forest use and management in 47 communities of Dhadhing, Kaski, Parbat, and Baglung districts. These studies suggest that people's active participation is a key solution to effective management of common property resources, particularly forests.

Karki et al. (1993) carried out detailed case studies of three villages in the *terai*, one each in Siraha, Saptari, and Udaypur districts, in connection with the Churia Forestry Development Project. The study aimed at understanding the issues regarding forest degradation and improved management through an understanding of the local use patterns and the peoples' resource needs. They noted that poverty is a major factor influencing forest use and management.

Furthermore, Karki et al. (1994) evaluated nine forest user groups in Palpa district and the Phewatal Watershed area and reached some interesting conclusions. The forest user groups in the Palpa area were more effective than those in the Phewatal area, because both internal and external forces play key roles in the effectiveness and functioning of FUGs. However, the Karki et al. (1994) study failed to note that even though both areas are culturally similar, FUGs in Palpa were more effective primarily because of SATA's involvement in the forestry project.

Except for some interesting studies by Bajracharya (1981), Seeland (1993), and McDougal (1979) on the Eastern Hill Region, only a few studies on ecology, environmental management, and community forestry can be added to the above list. Dunsmore

(1988) discussed at length the overall climate, geology, land use, and farming systems in the Arun Basin area (Dhankuta, Sankhuwasabha, and Bhojpur districts). Likewise, Shrestha (1989) noted the biological resources of the Arun Basin area and their diversity. Sizeland (1985) highlighted the community forestry programme conducted in Sankhuwasabha district between 1980-1985 and raised some technical and administrative issues. De Pater (1985), in her report, discussed community forestry programmes such as the *Panchayat Forest* and *Panchayat Protected Forest* programmes conducted in 1979-80 in Ilam district. Foreign aid agencies, such as the Koshi Hills Area Rural Development Project (KHARDEP), have been extending their activities to cover forestry programmes in the Eastern Region over the last one decade or so.

In 1977, KHARDEP started its programme to systematically uplift the socioeconomic conditions of the people of the Eastern Hill Region covering the four hill districts of Koshi Zone, Sankhuwasabha, Bhojpur, Dhankuta, and Terathum. But it is surprising to note that, in its total 13 sectoral programmes, very little emphasis was placed on forest use and management up to 1987. The Koshi Hills Community Forestry Programme (KHCF) began only in late 1987 and developed many subcomponents of the forestry programme in close coordination with the District Forest Offices in the Koshi Hills. The overall objective of the KHCF is to help the people of the Koshi hills to meet their basic requirements for tree products in a sustainable manner. Except for one Project Evaluation Report (Atkins' Land and Water Management 1991) and some Briefing Notes (1993), KHCF has little published material on forestry to date. But the Project Evaluation Report (1991:v) is interesting as it covers three areas under study: user group formation process, assessment of the costs and benefits of the projects, and recommendations for future activities.

A milestone in the field of environmental research on the Eastern Hill Region is the sixteen-volume report (1990) prepared by King Mahendra Trust for Nature Conservation (KMTNC 1991). This report addressed the long-term environmental and socioeconomic impacts that may result from the Arun III project. However, none of these volumes deal directly with community forest user groups or the indigenous forest resource management systems.

In August 1988, the Makalu-Barun Project was started in two hill districts of Eastern Nepal, Sankhuwasabha and Solukhumbu. The Makalu-Barun Project, in its various reports (Project Summary 1990), highlighted the various ethnic/caste groups, culture, economy, and the overall natural resource situation of the project area. But the report hardly shows an interrelationship between man and forest and how forests are managed locally. In fact, it was only in 1993 that two FUG programmes were launched in Tamkhu VDC and two more were started in late 1993. It is still not known how effective the forestry management component of the Makalu-Barun Project will be.

The above-mentioned documents, no doubt, provide excellent accounts of certain selected aspects of forestry in general, but they do not illustrate how different physical, sociocultural, economic, and institutional characteristics affect the process of organising various types of collective action for forestry management programmes in Nepal.

Conceptual Framework of Research

The general thrust of this research rests on two premises: (i) to what extent people participate collectively in the management of common pool resources such as forests? (ii) whether FUG programmes can sustain themselves in future or not considering the present socioeconomic structure of the users? Three major interrelated factors, biophysical, socioeconomic, and institutional, were altogether integrated to analyse the premises - people's participation, collective action, and sustainability.

The key indicators for each factor, the type of questions raised for research, and the conceptual framework of analysis are given in the chart on page 10.

The conceptual framework of the study follows. Figure 1 illustrates the interrelationships among the different factors.

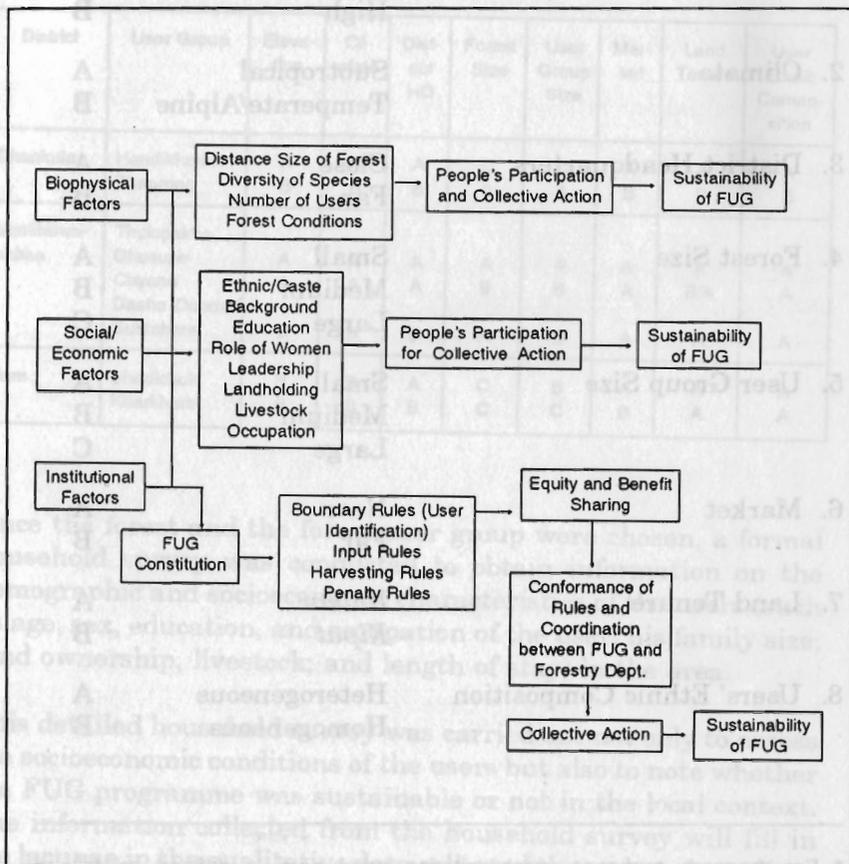
Methodology

Research was conducted in three hill districts of the Eastern Development Region - Dhankuta and Sankhuwasabha in the

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Factors	Key Indicators	Basic Questions Raised
1. Biophysical	i. Size of forest; condition of forest; diversity of species; distance of forest; altitude; climate; and regenerative capacity ii. Size of user groups	i. How are size, condition, type of species, distance, altitude, and climate related to the formation and management of FUGs? ii. How do users identify themselves in relation to the forest size and diversity of species? iii. How are forest size and user group size related to each other?
2. Socio-economic	i. Ethnicity/Caste ii. Education iii. Role of Women iv. Leadership v. Systems of land tenure <i>kipat</i> and <i>raikar</i> vi. Landholdings vii. Livestock viii. Occupation	i. In what way is ethnicity/caste related to FUG formation? ii. How does ethnicity/caste or homogeneous/heterogeneous culture affect the management of FUGs? iii. How is education related to user group dynamics and effective leadership? iv. To what extent are women participating in FUGs? v. Whether incorporating more women in FUGs will enhance the effectiveness of management? vi. In what manner is the local leadership formed and what type of role does leadership play in the management of FUGs? vii. Do the different systems of land tenure play a role in forest management? viii. How are land ownership, livestock, and occupation reflected in equity and benefit sharing? ix. How does the relative economic inequality of users affect forest management?
3. Institutional	i. Local boundary rules ii. Local input rules iii. Local harvesting rules iv. Local penalty rules v. Rules followed/observed vi. Government's forest rules	i. What types of boundary, input, harvesting, and penalty rules are formed in local FUGs? ii. To what extent are these rules observed/followed by the users? iii. What type of conflicts are taking place in local FUGs? iv. How are these conflicts being resolved locally? v. What type of role does the district forest staff play in the formation of FUGs, resolution of local conflicts, and forest management?

Figure 1: Conceptual Framework of Research



Koshi Zone and Ilam in Mechi Zone. These districts were chosen primarily because (i) they represented the Eastern Hills' ecology as a whole (elevation, climate, biodiversity, and accessibility); (ii) they represented the various cultural groups; and (iii) they represented both the *kipat* (communal) and *raikar* (state landlordism or non-communal system) systems of land tenure.

The following criteria with codes A, B, and C were used while selecting the user groups. Each criterion was weighed equally and the effectiveness of the criteria were measured as highly effective (1), effective (2), and less effective (3) (see details in Chapter IV).

1. Elevation	Low/Medium High	A B
2. Climate	Subtropical Temperate/Alpine	A B
3. District Headquarters	Close Far	A B
4. Forest Size	Small Medium Large	A B C
5. User Group Size	Small Medium Large	A B C
6. Market	Near Far	A B
7. Land Tenure	<i>Raikar</i> <i>Kipat</i>	A B
8. Users' Ethnic Composition	Heterogeneous Homogeneous	A B

* For research purposes, each criterion used here is defined as follows: Elevation, low = less than 1,219m and high = above 1,219m; District Headquarters: close = within 10km walking distance from a UG and Far = more than 10km walking distance from a UG; Forest Size: small = less than 10 hectares, medium = 10-50 hectares, and large = more than 50 hectares; User Group Size: small = less than 50 user households; Medium = 51-100 user households, and large = more than 100 user households, Market: near = within 10km walking distance from a UG and far = more than 10km walking distance from a UG; Users' Ethnic Composition: Heterogeneous = more than one cultural group and Homogeneous = single cultural group.

Taking the above criteria into account, the following user groups were chosen in the three districts in consultation with the district forest officials (Table 1.1).

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Table 1.1: Selection Criteria for User Groups

District	User Group	Elevation	Climate	District HQ	Forest Size	User Group Size	Market	Land Tenure	User Ethnic Composition
Dhankuta	Handikharka Thaprong	A B	A B	A B	C A	C A	A B	A B	A B
Sankhuwasabha	Thulopakha Dhusune Chyane Dashe <i>Danda</i> Sukrabare	A A B	A A B	A A B	A B A	A B B	A A A	A B/A A	A A A
Ilam	Bhedichok Kharkhare	B B	B B	A B	C C	B C	A B	A A	A A

Once the forest and the forest user group were chosen, a formal household survey was conducted to obtain information on the demographic and socioeconomic characteristics of the users (such as age, sex, education, and occupation of the user; his family size; land ownership; livestock; and length of stay) in the area.

This detailed household survey was carried out not only to assess the socioeconomic conditions of the users but also to note whether the FUG programme was sustainable or not in the local context. The information collected from the household survey will fill in the lacunae in the qualitative data collected through case studies.

The sample size varied from 65 per cent to 100 per cent, depending on the heterogeneity of the user group. The sample size increases as the heterogeneity of the group increases. Interviews were conducted with groups of men and women as well as with individuals, depending on the situation.

Key informant interviews provided information on the history and use of forests over the years. Detailed case studies of some of the users were deliberately collected to understand conflicting cases of use, management, and resolution. In all cases, the district forest officials were interviewed in order to understand the problems of forest management as a whole.

