Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Using the common theory of 'people's participation', this report examines the existing structure and functioning of FUGs in the Eastern Hill Region of Nepal. Seven case studies of FUGs located in three hill districts - Sankhuwasabha, Dhankuta, and Ilam - were used to examine how the various biophysical, sociocultural, economic, and institutional attributes are related to the performance of FUGs and their long-term sustainability. The major findings of this study are as follows (Tables 5.1, 5.2, and 5.3).

1. Proximity to district headquarters, population pressure, and government forestry programmes are closely associated with the formation of FUGs in the districts under study. All three factors have altogether contributed to the formation of the highest number of FUGs in Dhankuta district. Ilam district has the lowest number of FUGs as the area under forest cover is larger and thus there is no immediate pressure for the formation of FUGs.

2. Considering the population pressure, development of market centres, and migration factors, deforestation in the Eastern Hill Region is primarily a recent phenomenon. Its severity increased only after 1960 because of the changes in the Government's forest policy, which were accentuated by changes in the political structure over the years. The 1957 Forest Act alone was not responsible for heavy timber felling.

3. Physical attributes of forests, such as size and species' diversity, are linked not only to the effective management of forests but also to the identification of users and the increasing/decreasing number of users in the FUG study areas. Handikharka, Chyane Dashe *Danda*, and Bhedichok FUGs are relatively better managed because of their size and species' diversity. The number of users is highest in Handikharka because of the diversity of its tree species, and this has attracted a large number of users from other neighbouring areas - Kaino Ghari, Sirbani, and Chuliban. When there is an option to become users in different forests, users participate in different FUGs for future security in supplies of forest products rather than building an institutionally strong FUG. The forest size affects the delivery of forest products and limits the flow of forest products at any one time. It is because of this reason that many users want to participate in different FUGs, i.e., to obtain a variety of forest products. The exception, however, is Thulopakha Dhusune which is small in size, and also contains a minimal number of forest products, but which is better managed because of its dynamic leadership and its proximity to the district headquarters. Although Kharkhare forest is large and contains a fair number of species, it is poorly managed because of its large size and ineffective leadership.

   A user normally weighs the benefits and costs and, at the same time, considers whether becoming a permanent user or a multiple user is more beneficial. This is again an attempt to obtain benefits in the local context. For example, there are a lot of users in Handikharka at present who are not using forest products but who have become users because of the biodiversity of Handikharka forest. Therefore, users become users in the real sense only when they are assured that a particular forest yields good forest products. Similarly, in Thulopakha, there are a lot of users who contribute to FUG development and, instead of obtaining forest products from the FUG, buy them from the market. This is also a long-term calculation of economic benefits in the sense that, if they do not need forest products today, they may need them tommorrow.

Users know very well from which forest they can collect fodder, firewood, or timber. It is difficult to obtain all three forest products from one forest at the same time.

4. Sociocultural and economic attributes also play key roles in the effective management of FUGs. In FUGs in which people are better educated, or where there are many government employees, the community forestry programme is progressing gradually; the users hold discussions and sometimes seriously disagree on issues, e.g., how the FUG should perform and conduct its activities. A typical example of this is Handikharka in Dhankuta and Thulopakha Dhusune in Sankhuwasabha.

   Apart from Thaprong FUG, all FUGs are comprised of mixed communities with different languages, religions, and cultures. Nevertheless, this does not hamper communications among the users and they cooperate fully with one another in respect to forestry management. Although there is a slight problem regarding migrants in Handikharka FUG, they are not discriminated against in benefit-sharing, even though they are newcomers. The resource-poor and untouchable groups are not disadvantaged in terms of access to forest products or participation in the general assembly. In other words, there is no discrimination regarding access to forest resources - whether rich or poor, high or low caste. Low-caste users are found in all FUGs and they are not considered to be obstacles/hindrances to the effective management of FUGs.

   Nevertheless, ethnicity and cultural variables do play important roles in the formation of local leadership in all FUGs. Some members come from elite cultural groups. Ethnicity is also related to education and income, which are fundamental assets for obtaining a leading position in FUGs.

   Futhermore, cultural variables are important in the context of forming a majority or acquiring strength within the community. The ethnic majority not only helps to develop local leadership but also to form alliances in case

of any dispute that may arise within the community or outside. In Handikharka FUG, a few Pokhrel *Brahmin* dominate the decision-making process in the FUG because of their wealth, education, and bureaucratic contacts. There is also a communal feeling in the sense that they protect their group members in cases of conflict. This feeling, however, is not directly expressed in all FUGs.

5. The gender issue, particularly the role of women in FUG management, was acknowledged by all FUGs. In practice, however, women are considered weak and are discouraged from being active members of FUGs. Locally, there is no evidence that women's participation will enhance collective action and effective management of FUGs.

6. Even though there is relative economic inequality among various cultural groups and the heirarchical Hindu caste model is the basis of the social structure, there is no discrimination at all regarding benefit-sharing among groups. In other words, the traditional cultural and economic structures are not barriers to ensuring an equitable share of benefits and forest products among users.

7. Active leadership at the local level, proximity to district headquarters and big markets, forest size and biodiversity, and population pressure were identified as the key factors for effective management of forests in FUG study areas. Altitude and climate have minimal roles to play in forest management, although the quantity of fuel use may vary with altitude. But the data suggest that more mature trees are found at high altitudes and areas where access is difficult. Heterogeneous (mixed) communities are better than homogeneous ones in forest management because of the dynamism and innovativeness of different cultural groups. Study of the *kipat* system of land tenure does not necessarily indicate that forests were better preserved under it over the years than under the *raikar* system.

8. All FUGs have a *vidhan* (constitution) with operational rules for use and management of forest resources. These, however, differ from one FUG to another, according to the

size of the forest and the number of users. The institutional aspects of many FUGs are fairly good in terms of rule conformance and management procedures. Rules against overgrazing and unregulated fuelwood and fodder collection are quite effective. There is occasional violation of rules due to poverty, the government's ambiguous forest policy, and political cliques and factions within the community.

9. A good working relationship between the district forest staff and FUGs is sadly lacking even today. Operating and maintaining an FUG frequently requires coordination among its users and the district forest officials, but district officials clearly have divergent interests, preferences, and aspirations and lack both incentive and capability to help FUGs. Many officials feel that it is a programme designed from the top and backed by donor agencies. It was noticed that many rangers were ignorant of the latest developments in the forestry sector and were unaware of even the names of different tree species; they had no knowledge whatsoever of biomass. Most officials do not expect to be in a particular area for a long period of time, because of bureaucratic hassles within the Forestry Department which transfers DFOs constantly. If a particular DFO was more social and genuinely intended to help the users, it was noticed that the bureaucracy did not like it, and he was soon transferred elsewhere. Many forest officials do not spend time and energy on supervising the FUG programme because incentives of any kind are lacking.

10. The issue of sustainability also brings about internal and external dependency syndromes. Because of the relatively poor resource base of the users, FUGs such as Thaprong and Sukrabare may not be able to sustain themselves in the future. Even at present some forests, such as Thulopakha and Sukrabare, are not supplying sufficient forest products to their users. These forests require strict protection and management and internal as well as external resources for support. Without developing an agroforestry programme, many FUGs will not be able to

sustain themselves within the limitations of their resource base. Furthermore, cultural and economic domination by one group over another indirectly affects collective action among users, resulting in unsustainable forest use and management. Rapid population growth and development of market centres in the FUG study areas in recent years are creating an increasing demand for forest products, thereby depleting the local forest resources and making them more unsustainable.

Finally, some common attributes of users in the Eastern Hill Region regarding collective participation in the protection of common pool resources, e.g., forests, are listed in the following paragraphs.

i. The extent of the users' dependence on forests also affects collective action and participation in forest management. There are many landless users who keep a minimum number of livestock but use forest products, such as firewood, regularly to meet their basic needs. In other words, these users depend on forests as a major source of income for subsistence. Their participation in collective action is primarily motivated by their desire for immediate benefits. These resource-poor users have proved to be good forest guards as their labour is available at any time compared to other users who have more resources at their disposal. The type of choice available to users plays a key role in increasing their interest in collective action in FUGs. On the other hand, there are users who have simply become users and pretend to be participating collectively (such as the users in Handikharka and Thulopakha Dhusune), considering that they may not be permitted to use forest products in the future.

Apart from in Handikharka where there are a number of landless users, the income variance of users as such is not a significant variable for collective action programmes in FUGs. No doubt income on the whole is the most important factor influencing collective efforts and long-term sustainability of all FUGs, but the income variance of users *per se* does not hamper collective efforts.

ii. With respect to sociocultural and economic components, cultural factors, such as language, caste, and religion, are not major barriers for short-term or long-term cooperation among users for collective activities. In fact, it is rather ironic that today national politics play a more important role than sociocultural attributes at the local level when conflicts take place between users. There is a clearly visible polarisation and the users align with one particular political group or the other, irrespective of their cultural values. This has dangerous implications for the development and sustainability of FUGs and collective action by users at the village level in the Eastern Hill Region.

iii. Nepali society in general is status-ridden. The social status of a person is very important because it is rewarding in the wider social, economic, and political contexts. Hence, even at the village level, some people take active interest in bringing a development package programme, e.g., FUG programmes, not only for social status but also to protect their own interests as well. A position such as 'chairman' or 'secretary' is socially recognised, provides the legitimacy required to contact and interact with the bureaucracy, and yields unseen economic gains within and beyond the local level. Therefore, many FUGs in the Eastern Development Region were formed by such people and many users participate collectively only because of them.

Recommendations

Monitoring Socioeconomic Attributes

The future of FUGs, to a great extent, depends upon the sociocultural characteristics of the user groups themselves. Physical and community attributes create the environment within which users make choices and take action for their welfare and to improve their living standards (Tang 1989). In other words, monitoring of trends in forest use, allocation, and distribution; income of users; and intergroup relations should take place on a

regular basis in order to counter runaway processes within the system. Activities could be monitored by the users' executive committee by preparing a list of users with the following information: annual consumption of forest products (amount of fodder, firewood, and timber), categorisation of rich and poor farmers in terms of landholdings and livestock and intergroup relations (who is dependent on whom socially and economically). This information must be updated every year, and for this a training programme will be required for one or two enthusiastic members of the executive committee. This does not cost much at the local level.

Users' Identification Must Be Clearly Defined

Users are not clearly identified in many FUGs. Many FUGs deliver forest products to as many users as possible, or to those who require them, without considering the forest size and the availability of products. The boundary within which any FUG member operates is most essential not only for the long-term sustainability of the FUG but also to identify the real users at the local level also. This is necessary as it limits the number of users to a level at which the demand for forest products does not exceed supply. Furthermore, collective action cannot take place if more users are added every year. Temporary settlers should not be given full responsibility for forest protection as they have little attachment to the local area.

User Membership Must Be Restricted within a Single FUG

A person can become a user in any number of FUGs, depending upon his family size, need for forest products, political aspirations, etc. This system discourages a user from becoming loyal to a particular FUG and thus makes it difficult to develop the FUG as a sustainable institution in the future. If user membership is restricted to a single FUG, the user has no choice except to develop his own FUG as an institution. This system may create problems for some users as their forest may contain insufficient forest products for immediate use. Such users, if they wish, can be permitted to become users of a neighbouring FUG with the consent of both FUGs, but dual membership should be restricted to a certain time period, e.g., for a certain number of years only.

The FUG Boundary Must be Coterminous with the Political Boundary of an Area

The community forestry plan has overlooked the fact that the Village Development Committee (VDC) is the basic political unit. The inhabitants of a VDC will not permit their resources to be used by the people of other VDCs for nothing. Sukrabare FUG in Sankhuwasabha is a case in point in which gradual tension is being created between users of two VDCs. There has been no direct conflict so far because this FUG's forest contains few forest products. In Nepal, a person is identified on the basis of an area or village, which is defined by a political boundary, and thus he is morally committed to develop his own area. Unless users are integrated within a definite political boundary, not only will neighbourly relations be disturbed but serious challenges will arise regarding forest resource management issues at the local level, particularly when the forest area becomes dense.

Data on Biomass Necessary before Forming FUGs

As there is a lack of biomass data (such as the total stock of different species, their volume, and the availability of firewood and fodder) on most forests in the Eastern Hill Region, it cannot be clearly stated which forest is sufficient for how many users. Most FUGs were formed without considering whether the quantity of forest products was adequate and this must be given due priority while forming FUGs.

Benefit-sharing Should Be Channelised based on the Relative Economic Status of Users

Agriculture is the main economic basis for all users in the study areas. Landholding size and the number of livestock raised by a user greatly influence the pattern of forest use. A user with a large landholding and many livestock definitely uses more forest products than a user who keeps fewer livestock and has less land. This process does not ensure equitable distribution of the benefits of forest products. The problems of equity and benefit-sharing should be channelised based on the relative economic status of users.

Motivate Women for FUG Development Programmes

Although women are directly involved in collecting firewood and fodder in the Eastern Hill Region, they are discouraged from participating in the local FUG programme for sociocultural reasons. The participation of women in the FUG development programme can be increased gradually by understanding and using the local cultural norms. (i) Women from the cultural groups participating in the FUG programme who are more relaxed and used to mixing with men in their day-to-day lives, e.g., *Sherpa*, *Tamang*, *Rai*, and *Limbu*, should be encouraged. (ii) The District Forest Office should organise more forestry training programmes for women with lucrative cash incentives. This type of training must be provided by women rangers and foresters. The cash incentive will not only motivate women but also their husbands who will, in turn, encourage the women to participate in the forestry programme. (iii) The District Forest Office must have a good number of female rangers and foresters since their frequent visits to different FUGs may encourage more women to participate in the local FUG programmes.

Develop the Agroforestry Programme to Meet the Basic Needs of Users

Although the major purpose of FUGs is to meet both the present and future needs of its users for basic forest products, FUG management plans must incorporate measures to combat the problem of local poverty by making FUGs more sustainable in the future. The agroforesty programme, which has been introduced in Handikharka FUG, may be a short-term as well as a long-term solution to the problems of users who cannot fulfill their basic needs. But this requires careful programming backed by sufficient financial inputs, which most FUGs lack today. It also requires commitment from HMG as well as from donor agencies so that an appropriate and effective package may be developed to help resource-poor farmers.

Increase the Efficiency of Wood Use

In several FUG areas, there are many trees that are not only mature but are also rotten and such trees can be used for firewood

and timber extraction. Slightly more flexible rules for cutting such trees should be included in the management plan. This would solve the short-term needs of users for firewood and timber and would also provide immediate employment to many local, resource-poor farmers.

Close Coordination between the District Forest Offices and FUGs is Essential

There is little integration of local and national management systems in forestry programmes in Nepal. It is not easy for the Forest Department staff to be more supportive to users, as not only frequent training of district forest officials but also knowledge of the local sociocultural system are required.

Develop Institutional Capability

One of the most serious constraints to the development of FUGs as stable institutions is that many FUGs are weak in terms of leadership, resource allocation, distribution, and strict enforcement of their own rules as specified in the FUG constitution. Without strong technical and financial support from the District Forest Office for some years to come, FUGs will remain weak institutions at the local level.

Some Clauses of the Recent Government Forest Act (1992) should be Modified According to Local Needs

Some FUGs are unable to enforce rules and regulations because of the ambiguous law, for example, Clause 29 - '*Penalty given to the user who works against the Management Plan*'. If a user does not pay the fine or does not have the capital to do so, how will the case be settled? Furthermore, Clause 27 - '*Community Forest can be taken back*' and Clause 68 - '*Government can use Community Forest, Religious Forest, and Contract Forest*' make users insecure. Unless some of the clauses are modified, local people may not feel assured that the forests have been handed over to them for protection, use, and management.

Table 5.1: Some Social, Physical, and Institutional Attributes of FUGs in Sankhuwasabha District, 1993

FUGs	Thulopakha Dhusune	Chyane Dashe *Danda*	Sukrabare
1. Size of User Group			
Total User HHs	43	72	73
Population	267	432	454
Average HH Size	6.2	6.0	6.2
2. Community	Heterogeneous (mixed)	Heterogeneous (mixed)	Heterogeneous (mixed)
Dominant Groups	*Brahmin Newar Chhetri*	*Chhetri Brahmin Rai Tamang Damai*	*Chhetri Sarki Brahmin Newar*
Literacy Rate	100.0	72.3	69.8
3. Landholdings (*ropani*)	21.8	24.1	21.6
(Average per HH)			
Khet	18.9	18.6	12.8
Bari	2.9	8.5	8.8
Livestock (average)	2.7	5.7	8.0
Occupation			
Agricultural and Other	96.3	100.0	100.0
Other	3.7		
4. Physical (biological)			
Area under Forest	10	50	10
Altitude (metres)	700-1,000m	1,000-1,500m	1,600-1,800m
Slope	West-south	West-south	East-south
Regeneration Type	High	High	High
Tree Density	350	833	750
Seedling Density	13,350	12,900	5,000

FUGs	Thulopakha Dhusune	Chyane Dashe *Danda*	Sukrabare
Soil Type	Ochre-brown (loamy)	Ochre-brown (loamy)	Ochre-brown (loamy)
Soil Condition	Good	Good	Good
Institutional Management Type	Traditional	Traditional	Traditional
Under *Kipat/Raikar* System	*Raikar (Thari)*	*Kipat/Raikar Subba/Thari*	*Raikar Subba/Thari*
Organisational Structure	Formal	Formal	Formal
Decision-making Process	Users' Exe. Comm./User HHs	Users' Exe. Comm./User HHs	Users' Exe. Comm./User HHs
Current Leadership	Dynamic	Dynamic	Weak
Inputs	Rs 20 per m. voluntary rabour	Rs 10 per m. voluntary labour	No voluntary labour
Forest Watchers	Yes	Yes	No
Penalty for Violators	Yes	No	No
Access to Forest	Controlled/regulated	Regulated	Regulated/open
Distribution of Forest Products	Equal	Equal	Equal

Source: Survey

Table 5.2: Some Social, Physical, and Institutional Attributes of FUGs in Dhankuta District, 1993

FUGs	Handikharka	Thaprong
1. Size of User Group		
Total User HHs	224	49
Population	1,187	265
Average HH Size	5.3	5.4
2. Community	Heterogeneous (mixed)	Homogeneous

FUGs	Handikharka	Thaprong
Dominant Groups	*Rai* *Brahmin* *Newar* Bhujel *Chhetri* *Magar*	*Limbu*
Literacy Rate	63.9	54.8
Religious Faith	50% Hindu 50% Non-Hindu	Non-Hindu
3. Landholdings (*ropani*)		11.4
(Average per HH)	11.8	
Khet	3.8	0.0
Bari	8.0	11.4
Other		
Livestock (average)	6.0	4.7
Occupation		
Agriculture	18.0	16.0
Wage Labour	27.8	0.0
Agricultural and Other	54.2	84.0
4. Physical (biological)		
Area under Forest	150.0	7.5
Altitude (metres)	1,200-1,500m	1,500-1,700m
Slope	West-south	North-south
Regeneration Type	Medium	Medium
Tree Density	1,460	775
Seedling Density	4,060	3,275
Soil Type	Ochre-brown (loamy)	Ochre-brown (loamy)
Soil Condition	Good	Good
Institutional Management Type	Traditional	*Kipat*

FUGs	Handikharka	Thaprong
Management History	*Subba/Thari* from 3-4 generations	*Subba/Thari* from 3-4 generations
Kipat/Raikar	*Raikar*	*Kipat*
Organisational Structure	Formal	Formal
Nature of Access	Regulated	Regulated/open
Decision-making Process	Users' Exe. Comm./User HHs	Users' Exe. Comm./User HHs
Current Leadership	Active	Weak
Inputs	Voluntary contribution, 1 Member per Month (forest watcher)	Voluntary contribution - none
Forest Watchers	Yes	No
Penalty for Violators	Regular	None
Distribution of Forest Products	Equal	Equal

Source: Survey

Table 5.3: Some Social, Physical, and Institutional Attributes of FUGs in Ilam District, 1993

FUGs	Bhedichok	Kharkhare
1. Size of User Group		
Total User HHs	86	104
Population	514	514
Average HH Size	6.0	5.7
2. Community	Heterogeneous (mixed)	Heterogeneous (mixed)
Dominant Groups	*Gurung* *Rai* *Sherpa* *Tamang* *Brahmin* *Chhetri* *Sunuwar*	*Brahmin* *Chhetri* *Sherpa* *Newar* *Rai*

FUGs	Bhedichok	Kharkhare
Literacy Rate	77.9	82.2
Religious Faith	5.8% Hindu 94.2% Non-Hindu	56.8% Hindu 43.7% Non-Hindu
3. Landholdings (*ropani*)		
(Average per HH)	35.8	47.9
Khet	0.4	1.1
Bari	35.4	40.8
Other		
Livestock (average)	4.2	4.5
Occupation		
Agriculture	27.8	45.3
Agricultural and Other	72.2	54.7
4. Physical (biological)		
Area under Forest	200.0	300.0
Altitude (metres)	2,000-2,150m	1,800-1,900m
Slope	West-south	East-south
Regeneration Type	Medium	Medium
Tree Density	1,567	610
Seedling Density	1,444	5,350
Soil Type	Ochre-brown	Ochre-brown
Soil Condition	Good	Good
Institutional Management Type	Traditional	Traditional
Management history	Can be traced from *Subba/Thari* (3-4 generations)	Can be traced from *Subba/Thari* (3-4 generations)
Kipat/Raikar	*Raikar*	*Raikar*
Nature of Access	Regulated	Regulated/open

FUGs	Bhedichok	Kharkhare
Decision-making Channel	Users' Exe. Comm./User HHs	Users' Exe. Comm./User HHs
Leadership	Active	Weak
Forest Watchers	Yes	Yes
Penalty for Violators	Yes	Yes
Distribution of Forest Resources	Equal	Equal

Source: Survey