4. Eight Case Studies from Baitadi and Achham

The cases under study are presented within a common outline (as suggested by the conceptual model in Figure 1) divided into three sections, viz., 1) The Settlement and the User Group (Population), 2) Nature of the Forest(s) (Resources), and 3) Protection and Management Practices (Culture).

Karki*ko Ban*, Binashaun, Baitadi

Settlement and User Group

User Group Characteristics. Binashaun is located in Baitadi Village Development Committee (VDC) area of Baitadi district (see Map). It consists of two settlements locally known as *Malla Gaun* (upper village) and *Talla Gaun* (lower village) which together form ward no. 3 of Baitadi VDC. Baitadi-Gothlapani (the district headquarters) and Shyalek (a small market place) are to the southwest and south respectively of Binashaun (see Sketch Map 1).

There is a total of 76 households in Binashaun of which 67 are Karki[6], six are Bhatta[6], and one each Bista[6], Thapa[6], and *Kami*[6] households. The total human population in Binashaun is 450 with 227 males and 223 females. The average household size is 5.93 and the household(s) sizes range from single individuals to 14 members in a single household. The total animal population is 456. Of the 76 households, three Bhatta and one Thapa

[6] Nepalese surnames, from the *Chhetri* and *Brahmin* caste groups. *Kami* is the occupational caste of blacksmiths.

household(s) are yet to be included as primary user group members since they are recent migrants to the village. Generally any one who buys land property from the Karki households of Binashaun and settles there is eligible to become a primary user group member of the forest.

Agro-farming is the primary occupation of the people here. Some households have shops in Shyalek and Baitadi-Gothlapani. Most of the Karkis have worked in India and many of them are receiving pensions from the Indian Government.

Nature of the Forest

Karki*ko Ban* at Binashaun--protected and managed by the local people--is located not very far from *Talla Gaun* and *Malla Gaun* (see Sketch Map 1). The forest lies at an altitude of 1,200 to 1,300 masl It lies on a slope (the slope is estimated to be 35 degrees) with a northern aspect. The total area under forest cover is 18 ha. On the basis of the predominance of tree species, this forest can be called an oak *(Quercus leuco-trichophora)* forest. The other species are chestnut (*Castanopsis tribuloides*), laurel (*Lyonia ovalifolia*), *Mahuwa* (*Engelhavatia spicata*), berberry (*Berberis asiatica*), *ghangaru (Pyracantha crenulata*), *gurans* (*Rhododendron* sp.), and others.

Microclimatic variation was observed from two dimensions: horizontally and vertically. In the upper part of the forest, oak seems to be dominant, while in the lower part chestnut predominates. The eastern part of the forest, which is relatively drier, is dominated by *gurans* (*Rhododendron* sp.) while the gullies by the streams in the forest seem to have more of other species. Also in the drier parts of the forest, thorny bushes such as berberry are dominant.

The crown closure class for this forest is C_3 (70-100%). Because of the absence of light on the forest floor, oak seedlings are very few, while *gurans* and other species are doing much better. The regeneration in this forest, therefore, is mostly from coppice. The stock condition, growth, and diversity of the forest are good in general. The tree density in this forest is calculated as 3,204 trees per ha, while the seedling density is only 955 per ha (Table 2). Whether the forest is doing well from the biological point of view, and whether it will ensure sustainable use in the long term, is a question that needs further analysis (pertinent information on the biological condition of the forest is presented in the Annex).

The forest products currently available from this forest are fuelwood, fodder (both tree and grass fodder), timber, and materials for making agricultural implements.

Table 2: Some Characteristic Features of Cases Under Study from Baitadi and Achham, 1991

Categories/Features	Karki*ko Ban*, Baitadi	Seli*ko Ban*, Baitadi	Koti *Gaunko Ban*, Baitadi	Majarkhola*ko* Ban, Baitadi	Dhami *Gaunko* Ban, Achham	Kalapani*ko Ban*, Achham	Bhatwada*ko Ban*, Achham	Siddhesori*ko Ban*, Achham
User Group Size								
- Total Households	76	30	1206	98	230	66	99	128
- Total Population	450	195	1201	450	1573	374	676	746
- Total Animals	456	175	1420	578	1328	314	375	686
Social Profile	67 Karki	28 Bhatta	88 Bista	79 Badu	132 *Dhami*	60 *Bahun*	79 Bhat	104 Kunwar
(Predominant Castes)	3 Bhatta	2 *Damai*	42 Thaguna	14 Bohra	36 *Bahun*	9 *Kami*	8 Bhul	7 Lohar
Area under Forest	18 ha.	43 ha	5 ha.	10 ha.	17 ha.	29 ha.	65 ha.	84 ha.
Altitude	1200-1300 m	1300-1500 m	900-1400 m	2200-2400 m	1500-2000 m	1000-1250 m	1800-2300 m	580-1000 m
Aspect and Slope	N/35	N-W/22		S-E/30	N-E/20	E, S-W/30	N/17	S-E/28
Dominant Species	*Banj*	*Banj*	*Sal*, Pine	*Banj, Kharsu*	*Kharej, Banj*	*Sal*	*Kharej, Banj*	*Sal*
Regeneration Type	Coppice/Seed	Seed	Seed/Copppice	Seed	Seed	Seed/Coppice	Seed	Seed/Coppice/ Plantation
- Tree density	3204/ha	3714/ha	1102 & 95/ha	1346/ha	422/ha	4312/ha	1928/ha	1024/ha
- Seedling density	955/ha	5950/ha	4526 & 4500/ha	1980/ha	None	6743/ha	10221/ha	4658/ha
Crown Cover Type	C_2	C_2	Variable	C_2	C_2	C_2	C_2	C_2
Soil Condition	Good	Poor/Rocky	Sal: Poor	Good	Poor/Rocky	Rocky	Good	Rocky
Management Type	Indg	Indg	N.A.	Indg	Indg+Spon	Indg+Spon	Indg+Spon	Indg+Spon
Organisation	Informal	Formal	N.A.	Formal	Informal	Formal	Formal	Formal
Age of Protection	35 years	52 years	N.A.	45 Years	60 Years	10 Years	75 Years	15 Years
Nature of Access	Limited	Limited	Open	Limited	Limited	Limited	Limited	Limited
Decision-making	User HHs	UGC/User HHs	N.A.	UGC/User HHs	Indv. Leader	UGC	UGC	UGC
Other Remarks	1,2,3,4,6,7	4,5,6,7	4,7,8	2,4,6	3,4,6	4,6	4,6,8	3,4,7,8

1: No grazing allowed, 2: Religious fencing, 3: Market influence; 4: Silviculturally conservative; 5: Diseases in certain species, 6: Alternative resource source available, 7: Encroachments observed, 8: Timber obtained with government *purji*.

Crown Cover Class C_1=10% to 40%, C_2=40.1% to 70%, C_3=70.1 to 100%

The most important forest products, according to the villagers, are fuelwood, leaf litter, and timber for agricultural implements. The forest has not yet reached the stage of timber use--there are very few trees which have reached maturity. The people of Binashaun have a marginal land area of about twice the area of the forest patch. This land is used as grazing land as well to obtain fuelwood and hay, and this naturally reduces pressure on the protected forest. In addition, there is also a government forest nearby, once planted to be protected as a *Panchayat* Protected Forest, which also supplies them with timber and fuelwood (Sketch Map 1). For tree fodder, people have planted multipurpose fodder such as *bhewul (Grewia optiva)* on the edges of their farmlands.

Protection and Management Practices

Ownership and User Rights. Although the legal ownership of the forest lies with the Government, the people of Binashaun are protecting and managing the forest land as *de facto* owners. The Karkis claim that in 1938 (1995 B.S.) the land was registered in the names of 15 Karki households of this village and that the status has not changed since then. They argue that the 67 Karki households in the village today are descendants of the original 15 families and therefore are the owners of the forest land. In the event of another cadastral survey, the Karkis here seem prepared to register the land as communal land under the joint ownership of all the Karki households.[7]

There does not seem to be any specific set of rules for recruiting or dismissing user group members. However, generally, someone who buys land from the Karkis of Binashaun and settles there is eligible for membership, although the Karkis are the only locally recognised owners of the forest.[8]

Genesis and Development of Protection and Management. People recollect that the forest here was in good condition until after the period of the Rana Prime Minister, Juddha Shumshere, and that it was managed by a *Talukdar.* With the end of the Rana regime, the forest became an open access resource since there was no organisation involved in its

[7] Before the research team departed from Baitadi in March 1991, it was learned that there was going to be a cadastral survey in this area in the near future and that this particular forest land might be registered as the common property of Binashaun with a user group committee as the legal owner.

[8] There does not seem to be any question among the neighbouring settlements with regard to the ownership status of this forest by the Karkis of Binashaun. Adjacent villages were visited and the people there were asked who the owner of this forest patch was. People living in the neighbouring areas unequivocally pointed out that the forest patch in question belonged to the Karkis of Binashaun.

protection and management. As a result, the forest land gradually turned into shrubland having some edible fruits such as berberry or *kirmado* (*Berberis asiatica*).

The land on which this forest grows was, at one time, divided into two patches with Bhegarada *Khola* as the boundary (Sketch Map 1); the lower and upper forest corresponding with *Malla Gaun* and *Talla Gaun* respectively. The people recollect that the upper part had better fruits. Some time in 1952, some people from *Malla Gaun* prevented the children of *Talla Gaun* from entering their shrubland for the fruits. The people of *Talla Gaun* became upset and in response decided to protect their part of the forest as well by putting a fence around it. Since both patches of the forest were fenced off, coppice shoots regenerated and, in course of time, it became a good plantation forest.

By the early 1950s, the people of Binashaun began to realise that forest protection was indeed necessary to ensure a plentiful supply of forest resources. The idea of good forest regeneration motivated the villagers of both *Malla Gaun* and *Talla Gaun* to remove the boundaries between their forest patches and protect them as a single forest belonging to the Karki households of Binashaun.

Organisation. In the beginning there was no formal committee nor was there a forest guard (*ban pale*). Every household had not only to keep an eye on fellow villagers but also had to attend all the meetings relating to the forest. In order to delegate some of the responsibilities, in 1975 (2032 B.S.), a forest committee consisting of seven members was formed. This committee, however, came to an end within a few years. The reasons for dissolving the committee were 1) there was no reward (i.e., remuneration) for forest committee members and 2) during its tenure the committee members seized the equipment of offenders of the protection rules and also punished them. This created discord among the people. Some user group members began to feel that the committee members were acting as their superiors and enjoying privileges. This conflict, concerning the implementation of the rules and regulations by the committee, led to the breakdown of the formal committee. The third reason was that some committee members migrated to other places--the urban centres in the *Terai*.

After the collapse of the forest committee, the *panchayat* officials of this ward were recognised as ex-officio members of the user group committee. However, with the collapse of the *Panchayat* System, this also came to an end.

There is no user group committee in Binashaun now. Currently, the priests (*pujaris)* of Kedar Mandu and Jagannath Mandu (two local temples) issue final permission on

recommendations for user households to fell green trees. The needs of individual households are taken into consideration in making such decisions.

Decision-making. It is the Karki households that are involved in decision-making as users and consensus is necessary for any decision. It should be noted that, if male members are not present in a particular household, a relative or a neighbour represents it at the community meetings. Later the decisions are conveyed to the women of that particular household who are then obliged to endorse them.

The main users of the forest are the women and children. They have to collect leaf litter, fodder, and firewood. However, women are excluded from taking part in decision-making. They are not invited to the public meetings--the local cultural norms and values prescribe that women should not take part in public meetings along with men.

Rules and Regulations. Dry fuelwood can be collected at any time. There is no restriction on the amount and frequency of dry fuelwood collection. The collection of tree fodder is restricted while green grass can be collected[9]. Leaf litter can be collected at any time from the forest. There is no rule limiting collection according to the season, amount, and frequency of collection -- a family which has more labour can, therefore, collect more.

By the consensus of user members, timber can be obtained for schools, temples, or other institutions. If an individual household is deemed to be in need of timber for house construction, permission is issued by the priests of the local temples based on the recommendations of the user group members. Felling trees to make agricultural implements seems to be accepted.

Product-sharing: Meeting the Needs. Product-sharing seems to be equitable--based on the size of a household. Timber is given (from the protected forest) only to those members who need to construct or repair a house.

As we noted above, the people of Binashaun have access to alternative sources of forest resources. People here procure about 60 per cent of their leaf fodder needs from their own farmlands, 35 per cent from the marginal lands, and only five per cent from the protected forest. Most of the leaf litter is collected from the protected forest (80%), while grazing

[9] The research team observed (during forest visits some trees were observed to have been lopped) that tree fodder was illegally cut from chestnut (*katus*) trees.

is mostly carried out on marginal lands. Agricultural implements are the most essential need of the people of Binashaun. Of the total timber requirement for making agricultural implements, about 40 per cent each from the protected forest and marginal lands and 10 per cent each from private farmlands and the government forest are collected by the people here.

If we take into account the fact that the people of Binashaun meet their needs for forest resources without much difficulty from the protected forest, private forest, farmlands, marginal lands, and the government forest, the resource situation here can be described as one of plenty.

External Factors. Karki*ko Ban*, Binashaun, on its southern side, shows some signs of stealing of forest products. Perhaps the market at Shyalek (where a fuelwood load of about 30 kg is sold for Rs 20) is partly responsible for this. What do the people of Binashaun desire from the Government and other institutions? They certainly do not want any intervention in user rights. However, the people told the research team that the construction of a fence around the forest would be desirable.

Some Pragmatic Strategies/Practices. The people here have been using 'religious fencing' to protect the forest. Prayer flags or cloths *(neja)* from the Kedar Mandu are placed on the boundary lines of the forest and are renewed whenever illicit felling and abuse of the forest occurs. The religious beliefs--fear of punishment from the deity--prevent people from abusing the forest. Women are also prohibited from entering the forest during their monthly periods.

The Karki households confiscate the bamboo baskets, *(doko)* ropes, and the cutting implements from the people who are found stealing forest products from this forest. However, no other punishment seems to have been given so far. Even when one of the user members is caught felling an oak tree, it is merely suggested that the member should not repeat such activities in future.

The people of Binashaun have taken some measures to prevent encroachment by outsiders. On the southern side they have dug a ditch on the boundary, thereby making it difficult for outsiders to enter the forest.

Another strategy, as people revealed, was the allocation of one patch of their communal land as PPF in a place where pine plantation was also carried out several years ago. This acted as a shield to their protected forest by making forest resources available to outsiders.

Seli*ko Ban*, Seli-Salena, Baitadi

Settlement and User Group

User Group Characteristics. The people of Seli have an interesting story regarding how their settlement began here. According to some elderly people, about 300 years ago the Seli region was under the rule of the local Chand *Raja*[10]. About the same time, four Bhatta[11] families came there and helped the then Chand *Raja* in various ways. The ruler was pleased with their services and hard work and asked the Bhatta families to choose a place for settlement. The clever ancestors selected this site, which not only had a good forest nearby but also had good drinking water sources as well as land for agro-farming.

The Seli village forms ward no. 4 of Salena VDC in Baitadi (Sketch Map 1). This settlement consists of 30 households of which 28 are Bhatta and the remaining two are *Damai*[12]. The total population of Seli is 195, having 100 males and 95 females. All user households are subsistence farmers. The major crops cultivated are rice, maize/corn, wheat, and sugarcane. A few people from here go to India for employment.

People here keep their animals on the ground floor of their houses in order to shield them from wild beasts, e.g., leopards.

Nature of the Forest

Seli*ko Ban* faces northwest and it has a 22 degree slope. The forest lies within a walking distance of two or three minutes from the settlement of Seli. The other nearby settlements in the area are at a distance of at least 30 minutes walk from here. The boundary of the forest is: north--Gwani village, south--Ghoddhunga, east--Kumarkhali, and west--Bhadeurodo.

The land area under forest cover is estimated as 43 ha. The canopy class is C_3. Major species in the forest are oak (*Quercus leucotrichophora*), chestnut (*Castanopsis tribuloides*), oak or *phalant* (*Quercus glauca*), and box myrtle (*Myrica esculenta*). A number of oak or

[10] The local *Chhetri* overlord

[11] Surname of a *Brahmin* clan.

[12] Occupational caste name for tailors

banj (*Quercus leucotrichophora*) trees are suffering from pest, pathogen, gull, and epiphytes[13]. The site condition is also poor and this has resulted in uneven seedling regeneration. The regeneration in this forest is observed to be mostly from seeds. The density of this forest was estimated as 3,714 trees per hectare and 5,950 seedlings per hectare (Table 2). Thus, in spite of the poor soil condition and the diseases of certain trees, the forest is in good shape. Most of the trees are mature--ready to be harvested.

Protection and Management Practices

Ownership and User Rights. The legal ownership of this forest land lies with the Government, but the users have *de facto* right over it. They have been protecting and managing the forest as their own. The Forest Department in Baitadi has played no role whatsoever in the protection and management of this forest.

Two types of user are distinguished here, viz., primary and secondary. The 30 households in Seli are primary users. They are allowed to graze their animals and to collect leaf litter and dry fuelwood during the period from mid-December to mid-June. In case a whole tree becomes dry and has more than two loads of fuelwood, it is equally divided among the primary users. The people living in other nearby settlements may be regarded as secondary users. They cannot get timber from Seli*ko Ban* nor are they allowed to graze their animals there. However, there is no restriction on the collection of leaf litter during the period when the forest is open for this purpose.

Genesis and Development of Protection and Management. The protection and management practices which exist today were begun by Kuldev and Bhandev Bhatta in 1938 (1995 B.S.) the year the land under Seli*ko Ban* was registered as forest land. There has been no strong individual leadership in recent years, and people have participated equally in protection and management activities. An elderly Bhatta pointed out that pine trees were predominant in the beginning but were felled by people while preserving oak or *(Quercus leucotrichophora)* trees--thus achieving a gradual replacement of pine forest by broad-leaved forest. People report that some thorny species such as *ghangaru* (*Pyracantha crenulata*), berberry *(Berberis asiatica*), and raspberry *(Rubus ellipticus)* were frequently cleared in order to protect or to allow for better regeneration of oak. Rules and regulations were also formulated around that time (i.e., in 1938) to protect the oak forest.

[13] People report that in 1960 (2017 B.S.) there was a heavy snowfall which broke tree branches of oak or *banj* and *phalant*, and after this the trees caught different kinds of diseases.

Organisation. There was no formal UGC in Seli until 1964 (2021 B.S.) for the protection and management of this forest. In 1965 (2022 B.S.) a committee was formed by the people and this has continued to exist and function effectively ever since. At present, the UGC consists of one Treasurer and four Members and there has been no provision for other officials such as a president or a secretary. The reasons for not having these officials in the UGC were given as: 1) the President or Secretary may use his position to influence decision-making and 2) there will be a hierarchical structure within the committee which is not regarded as good for an effective UGC. The number of committee members may vary according to the felt need. The tenure of the UGC is two years. Generally all user household members come together to select dependable, active, and efficient people to become committee members. The meetings are held in the evening -- a convenient time which does not conflict with their farm chores and other work.

Decision-making. Decisions are generally made by the UGC and endorsed by the members. In certain cases the decisions are made by a general meeting of all the user group households (see the section on rules and regulations). Women do not attend the meetings and thus are not involved directly in decision-making. However, they do participate indirectly by making their views known to their husbands or a male member who represents their households in the community meetings.

Rules and Regulations. Felling green trees is restricted. If a family needs to build or repair a house, the committee issues permission to fell a green tree for timber. Any violators are liable for punishment in the form of cash fines[14]. Someone violating the regulation for the first time generally pays a penalty of five rupees which goes up to Rs 50 and Rs 150 for the second and third violations respectively. A fourth-time violator is tried in front of all the user members and they may fix any amount of fine deemed appropriate depending on the seriousness of the violation.[15]

[14] The villagers have maintained a common fund from this cash income. The fund is used to buy utensils for use during ceremonies, temple construction, or repair works, etc. User households can also get loans from this fund at a reasonable rate of interest. We were informed by the committee members that their current balance was more than Rs 5,500.

[15] People think that the decisions made so far regarding the punishments have been impartial; even a *Pradhan Pancha* (a village chairman under the previous government system) was made to pay the penalty at one time when it was found that he had cut a small sapling without seeking permission from the UGC. A 40 year old man told the research team that once he had prepared a bundle of leaf litter in a net and needed something to close the net to make it easier for him to carry the load. He cut a few twigs and put them under the load of his leaf litter. He had to pay a fine of five rupees for cutting the green twigs because it is against the rule. People say that almost everyone has been penalised at least once except *Gori* Master (a *Damai*).

The people in Seli also have rules to specify the time interval in which they can obtain certain forest products. For instance, people can gather poles to make *lutyat*.[16]

Product-Sharing: Meeting the Needs. People are happy with their own arrangements regarding the product-sharing mechanism. Every user household can collect leaf litter and dry branches or twigs for fuel during the specified time period. Each family is also allowed to cut one green branch from a tree once a year before agricultural activities begin to make handles and other parts of agricultural implements. If a household needs more than this, they need to find the required product from their own trees or from elsewhere.

Almost all the households have their own trees and grassland *(phagala)*. People report that about 75 per cent of their fuelwood comes from thorny bushes such as *ghangaru (Pyracantha crenulata)* and berberry or *kirmada (Berberis asiatica)*, about 10 per cent from their own trees, and the remainder from Seli*ko Ban*. An average household gets 75 per cent of its fodder from its own farm and about 20 per cent from marginal lands. Since grazing is allowed in Seli*ko Ban*, 80 per cent of the grazing of domestic animals is carried out in the protected forest. Besides, the people of Seli also get all their leaf litter supply from this forest.

External Factors. The people told us an interesting anecdote which stressed their commitment towards protecting Seli*ko Ban* from outside forces. About ten years ago, a man from one of the neighbouring villages was found felling a tree in Seli*ko Ban*. The people of Seli told the man that he should not have done this. In response, the man showed them a permit (*purji* -- an authorisation to fell a tree) paper he had obtained from the DFO's office and insisted that he had a right to obtain the timber and wood from the forest. When he refused to listen to the people of Seli they tore up his permit. The tree that the man felled was chopped into pieces and divided equally among the villagers. From this anecdote it becomes evident that the people of Seli are very possessive about their forest and are ready to protect it from external forces.

The people of Seli want support from the Government and other institutions to help them protect the forest from illicit felling. The Government could also provide technical support in relevant areas, including for control of the diseases seen in certain species of the trees here.

[16] *Lutyat* is a pole erected on the gound and used to tie straw, hay, or maize around for storage. Often fodder trees are also used to store hay and straw. A *lutyat* pole is used for at least five years before a new one can be obtained for that purpose.

Some Pragmatic Strategies/Practices. Seli*ko Ban* borders on Salena*ko Ban* (Sketch Map 1). The people told the research team that at one time both of the forests were in good condition. Now, however, Salena*ko Ban* is degraded, perhaps due to the ineffective protection and management system. The research team observed that the condition of the site of Salena*ko Ban* is better than that of Seli*ko Ban*. The people of Seli are protecting the forest by seeking the resources (forest) needed daily from elsewhere. For instance, for fuelwood, most of the families here seem to depend on thorny bushes such as *chutro* (*Berberis asiatica*) and *ghangaru* (*Pyracantha crenulata*) instead of lopping branches from the protected forest.

The people of Salena, Kaparta, Likhoda, and Ainchi Kanda (Sketch Map 1) are allowed to collect some forest products within the rules and regulations of the Seli UGC. The people of Seli have been encouraging others to protect their own forests. The people of Likhoda have recently (about ten years ago) started to protect and manage a forest near their settlement. Seli people want others to protect their own forests not only to provide those people with the needed forest products but also as a safety mechanism for Seli*ko Ban* (i.e., reduced population pressure on this forest). The people of Seli report that they have planted some oak and other species because of their value as fruit trees or as good fodder trees.

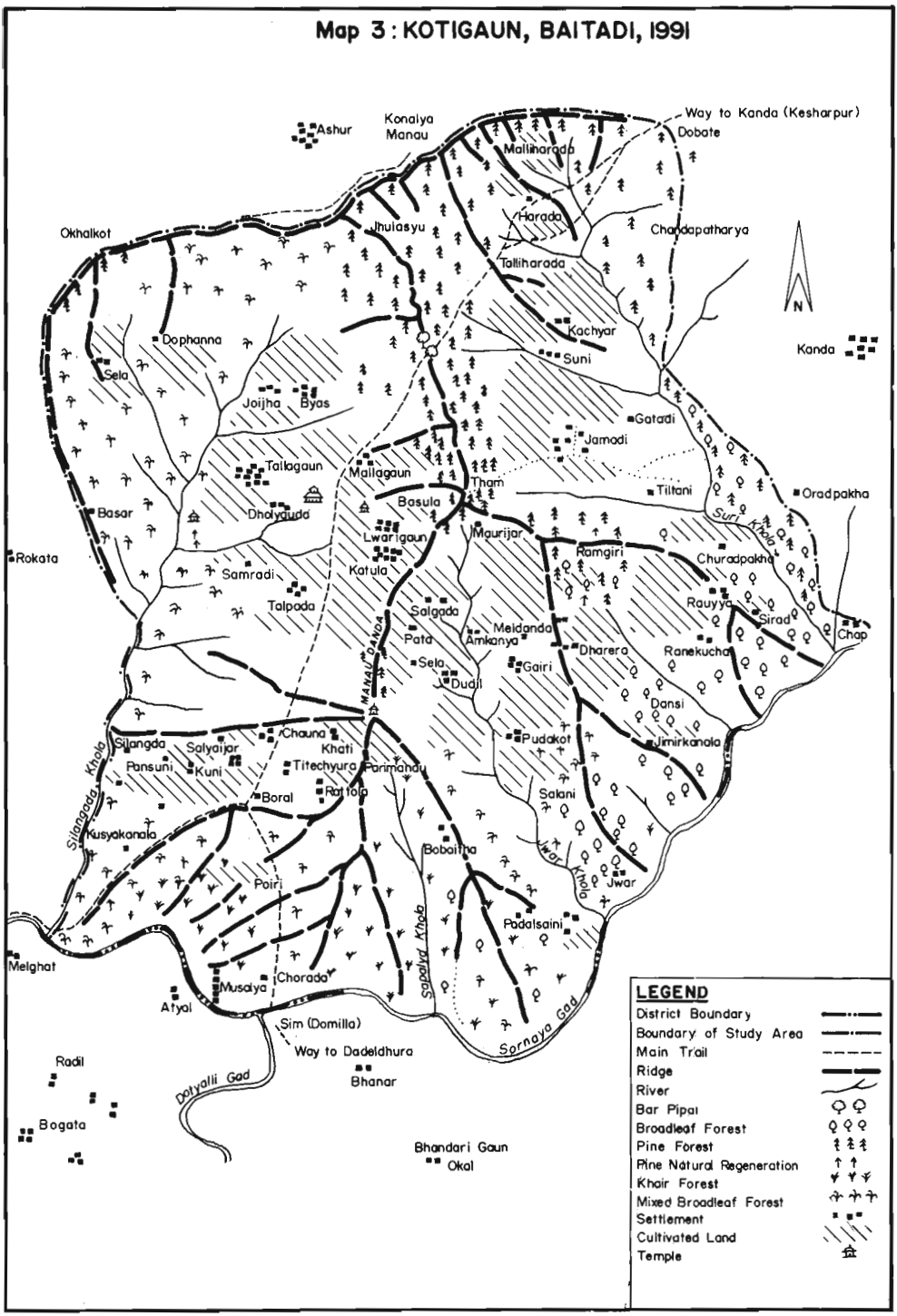
People also migrate seasonally as a resource-tapping strategy. In other villages within the region, eleven families have a satellite household where they have farms as well as access to other forests to meet some of their requirements for forest products.

Koti *Gaunko Ban*, Koti *Gaun*, Baitadi

Settlement and User Group

User Group Characteristics. Koti *Gaun* is located on the southern border of Baitadi district--bordering Dadeldhura. It is comprised of ward nos. three, four, five, and six under Bishalpur VDC. The altitude in Koti *Gaun* ranges from 900 m (at Sornaya Gad) to 1,400 m (at the top of Kanaly Mandu *Danda*).

The settlements in Koti *Gaun* are scattered and sparse, there being 20 main settlements and about 30 single houses (locally known as *khorka*) scattered throughout the various forest patches (Sketch Map 3).


Map 3 : KOTIGAUN, BAITADI, 1991
Ashur
Konalya Manau
Way to Kanda (Kesharpur)
Dobate
Mallaharada
Okhalkot
Jhulasyu
Harada
Chandapatharya
Talliharada
N
Kachyar
Kanda
Suni
Dophanna
Sela
Joijha
Byas
Gatadi
Jamadi
Tallagaun
Mallagaun
Tham
Tiltani
Oradpakha
Basar
Dholyauda
Basula
Suri Khola
Maurijar
Rokata
Lwarigaun
Ramgiri
Churadpakha
Samradi
Katula
Talpada
Salgada
Rauiya
Sirad
Chap
Meldanda
Amkanya
Pata
Dharera
Ranekucha
Sela
Gairi
Dudil
MANAU DANDA
Dansi
Chauna
Khati
Pudakot
Jimirkanala
Silangada Khola
Silangada
Salyaijar
Pansuni
Kuni
Titechyura
Parimahadu
Sakani
Boral
Ratola
Kusyakanala
Bobaitha
Jwar Khola
Jwar
Poiri
Padalsaini
Sobaiya Khola
Melghat
Chorada
Musaiya
Atyal
Sim (Domilla)
Sornaya Gad
Way to Dadeldhura
Radil
Bhanar
Dotyalli Gad
Bogata
Bhandari Gaun
Okal
LEGEND
District Boundary
Boundary of Study Area
Main Trail
Ridge
River
Bar Pipal
Broadleaf Forest
Pine Forest
Pine Natural Regeneration
Khair Forest
Mixed Broadleaf Forest
Settlement
Cultivated Land
Temple

Many families own houses in more than one place and they move from one settlement to another based on the seasonal work schedule related to agricultural activities. About 20 households have *khet* (irrigated rice land) and a house in Dadeldhura district across Sornaya Gad. These families move down there during paddy and wheat planting and harvesting periods only. As reported by the people here, some families from Koti *Gaun* migrated permanently to Dadeldhura and have been living there for the past 15 years.

The community in Koti *Gaun* consists of 206 households divided into 13 different castes and subcastes. Among the *Brahmins,* there are eight Joshi, one Panta, and three Bhatta households. *Chhetris* are predominant in Koti *Gaun* with 144 households (88 Bista, 42 Thagunna, and the rest are Sutar, Khadka, and Ojha). There are 39 *Kami* (blacksmiths) and three *Suni* (goldsmiths) households while the remaining households are *Damai* (tailors and musicians). Its total population is 1,201.

Currently, the people of Koti *Gaun* are mainly dependent upon agriculture. Some elderly people say that, at one time, people here depended primarily upon livestock-rearing and most households owned about 20 buffaloes each. The number of households then was much smaller. Over the past 20 years, people think that, although the population has increased in the area, their economic status has declined. Occasionally, some villagers make some cash income by selling timber and agricultural implements to neighbouring villagers. During the winter, a number of people from larger and poorer households go to India to work as wage labourers. When they return from their winter sojourn, they bring with them clothing, salt, pots and pans, and some agricultural implements.

Overall, therefore, the economy of Koti *Gaun* is dependent upon agro-farming which, in turn, is dependent on forest resources to a considerable extent, and the people do understand this relationship. The scarcity of forest resources is felt, but people tend to consider forest resources as a never-ending gift of nature. The local people think that the Government is the legal owner of the green trees in the forests while the people are the owners of the grass, fodder, dry leaf litter, and the branches of trees. This perhaps tells us why the trees are lopped indiscriminately by the people of Koti *Gaun*. It is interesting that they think that the neighbouring villagers should not have user rights in their forests since the forests here are Koti *Gaunko Ban*, i.e., "theirs".

Most of the villagers were found to be unaware of the CFDP, although Baitadi happens to be one of the districts where this programme was launched. People are aware of the deteriorating forest resources in their area but do not seem to have a clear idea as to how they could prevent a scarcity crisis. According to the villagers, firewood and fodder are

the main forest products that they need daily. Other products needed occasionally are wood for agricultural implements, *lutyat*, and timber for house construction. Broad-leaved tree species are preferred to pine.

Nature of the Forest

Koti *Gaunko Ban* includes several patches of forest within the village area of Koti *Gaun* (Sketch Map 3). The forests here have greater diversity in terms of tree and shrub species as a result of altitudinal and climatic variations. The total land area under forest in Koti *Gaun* is estimated at 75 ha

Several types of forest may be identified on the basis of dominant tree species.

- Pure pine is found around Harada, Jhulshyun, and Tham (all above 1,000 m) -- about 50 per cent of the total estimated forest of Koti *Gaun* consists of pine.
- *Sal (Shorea robusta)* is mainly found around Sirad, Dansi, Salani, and other places along the bank of Sornaya Gad and Suniko *Kholo* (below 1,100 m). This type of forest covers about 40 per cent of the total forest area of Koti *Gaun*.
- *Khair* forest is found mainly in Khorada and Pairi--it covers about three per cent of the total forest. The soil in this forest has high lime content and the forest has a southerly aspect.
- Mixed forests consist of about seven per cent of the total forest area. Two types of mixed forest are found: pine and *sal* mixed, which is found in the transition zone (between 1,000-1,100 m) mainly on northeastern and southeastern aspects, and broad-leaved mixed forest, found in Babaitha, Saphalya, and some other surrounding areas. The tree species found in this type of forest are *botdhaiyaro* (*Lagerstomeia parviflora*), myrobalan (*Phyllanthus emblica*), *sal* tree (*Shorea robusta*), *saj* (*Terminalia alata*), Indian trumpet flower or *tatari* (*Oroxylum indicum*), *phaledo* (*Erythrina variegata*), and *bel (Aegle marmelos)*. Based on the climatic conditions, Koti *Gaunko Ban* may be classified as: 1) subtropical pine forest, 2) subtropical *sal (Shorea robusta)* forest, and 3) subtropical mixed forest.

In areas surrounding the farmlands, almost all trees have been used, therefore, shrubland exists which consists of species such as: berberry (*Berberis asiatica), ghangaru (Pyracantha crenulata)*, and raspberry (*Rubus ellipticus*).

Present Status of Koti *Gaunko Ban*. Elderly people told us that the people had cleared some forest patches and converted them into agricultural land and shrubland during the past

20 years. Another detrimental factor has been the practice of *ijar khanne*--slash and burn cultivation.

Almost all the mature *sal (Shorea robusta)* trees (of timber value) have been removed and the remaining *sal (Shorea robusta)* as well as the *saj (Terminalia alata)* trees have been heavily lopped. People have lopped even the tops of *sal (Shorea robusta)* and *saj (Terminalia alata)* saplings. All the forest patches in Koti *Gaun* are open for grazing. The research team found that a number of trees were destroyed by fire, and this is said to occur almost every year. A number of pine trees were also found cut and lying on the ground with only the basal portion (about 5m long), tips, and branches removed from them.[17] In spite of such indiscriminate felling of pine trees, good natural regeneration of pine was observed. *Khair (Acacia catechu)* and mixed forest patches were also observed. The pine forest was found to be well-stocked compared to other forests.

Protection and Management Practices

In our study, Koti *Gaun* is a case in which the forest resources have been in a state of open access. However, the forests here do not seem to be accessible to people from other villages falling outside the Koti *Gaun* area.

A number of factors seem to be responsible for the degradation of forests in Koti *Gaun*. The society in Koti *Gaun* is heterogeneous, consisting of 13 different castes. Apparently, there seem to be inter-caste conflicts regarding the use of land and forest resources. People tend to disregard the decisions made by leaders belonging to other castes. Besides, it is hard for all the people from Koti *Gaun* to meet regularly, thereby creating a communication gap among fellow villagers.

People who have been living closer to the forest patches have been using forest products without any restriction. They tend to be against any new rules and regulations which would restrict their resource use practices, and this makes protection and management difficult.

Women do not participate in the decision-making process although they are the primary collectors of forest resources. Their fodder collection practices were noticed to be harmful

[17] One of these pine trees was measured by the research team in Tham and some of the relevant measurements are: length of bole = 21m, girth at base = 208cm, girth at tip = 85cm, and length of stump = 2m.

to the forest. They lop the branches of *sal* trees, cut the tips of main stems too, wound trees without any reason, and destroy many seedlings and saplings while cutting ground grass.

As stated above, some people have houses in more than one place and this means increased use of timber for house construction. Some people seem to sell timber to neighbouring villagers. Since there is no committee or any organised body to enforce the rules and regulations made from time to time for the protection and management of the forest, it has been difficult to prevent the degradation of the *sal* forest in Koti *Gaun*.

Ownership and User Rights. Legal tenure of Koti *Gaunko Ban* lies with the Government. Most of the villagers think that the Government is the owner of the trees in the forest and the land under it and that they themselves are the owners of grass, fodder, and other minor forest products. They do not restrict the people of Koti *Gaun* from harvesting any forest products but try to stop the people from other neighbouring villages such as Kanda, Ashur, and Rokata from taking the same. This causes conflicts among neighbouring villagers. It seems that the people of Koti *Gaun* regard themselves as the *de facto* owners of Koti *Gaunko Ban*, and that, therefore, the forest is accessible only to the people of Koti *Gaun*.

Genesis and Development of Protection and Management. Until February 1991 (when the research team arrived there), the people of Koti *Gaun* did not have a forest protection and management system. However, some village leaders had realised the problem of forest degradation more than two decades ago, and some time in 1968 (2025 B.S.) had made attempts to protect the *sal (Shorea robusta)* forest for the first time. It is said that some of these people went around telling people to save *sal (Shorea robusta)* trees when almost everyone from the village had come to celebrate a local festival. This appeal worked only for a few days after which people started to cut and lop trees as usual.

Four years later (2029 B.S.) some of the leaders met and they made rules and regulations for the protection and management of the *sal (Shorea robusta)* forest with provisions to punish the offenders. According to the rules, no one was allowed to lop *sal (Shorea robusta)* trees for fodder nor to fell immature *sal (Shorea robusta)* trees for any other purpose. Offenders were to be punished with a fine of Rs 50 for the first time and Rs 100 the second time. A third time offender was to be referred to the District Forest Office for appropriate action. This was the first time that they had ever had a set of written rules and regulations in Koti *Gaun* for the protection and management of the forest. Unfortunately, this attempt also was not effective for more than a few months -- people started violating the rules but were not punished.

In 1984/85 (2042 B.S.), again during a local festival, a strong voice was raised by some leaders and influential people -- such as the village headman and priests and other senior members of the village -- showing strong concern for the protection and management of the *sal* forest. This time the protection became effective for three years with very few cases of violation. However, the fact that they did not have an authorised body to enforce the rules -- to punish the offenders, for instance -- gradually eroded people's adherence to the rules. No individual was ready to punish the offenders and make personal enemies. This kind of situation led to the violation of rules by even those who were in favour of protection of the *sal (Shorea robusta)* forest. This brings us to the time of our arrival in Koti *Gaun* in February 1991 when Koti *Gaunko Ban* was still an open access forest.

The research team learned that the people in Koti *Gaun* were frightened about its arrival there. Towards the end of February 1991, a meeting was held in a local school where the majority of households were represented. The research team took this as an opportunity to explain the purpose of its research to the people. At this meeting the people constituted a forest protection committee which was empowered to make rules and regulations with regard to the proper protection and management of the forests of Koti *Gaun*. A few days later the new committee met and charted some rules and regulations.

Decision-making. Most of the decisions are made by influential people and leaders who happen to be *Brahmins* and *Chhetris*. There are people from several sub-castes of these two castes in Koti *Gaun*. From what the people told the research team, there seemed to be a tendency among the people of Koti *Gaun* to disregard any decision if none of their people (i.e., fellowmen from the same caste or sub-caste group) were involved in decision-making.

Women were also not involved directly in any kind of forest protection and management decision-making. Women here do most of the farm work as well as all work related to collection of forest products, apart from timber collection. However, local cultural norms prevent women from participating in such discussions.

Rules and Regulations. The committee decided that no green products would be removed from the forest. Any offender would be tried by the committee and, if found guilty, would have to pay Rs 250 as a penalty. If a person were to be found guilty a second time, s/he would be referred to the DFO by the fellow villagers. The committee also decided that no one would secure a permit for felling trees from any of the degraded forests of Koti *Gaun* until another provision was made for this purpose. If someone happened to bring a permit the committee would stop the individual from felling a tree in Koti *Gaunko Ban*. The

committee also passed a resolution concerning the issue of *ijar* (slash and burn agriculture) stating that, only those families dependent on *ijar* for subsistence would be allowed to continue with the practice.[18]

External Factors. The people from the District Forest Office in Baitadi hardly visit this area. The research team was told that neither a DFO nor a ranger had visited Koti *Gaun* during the past five years. Ironically, forest guards visiting the forests here are also held to be responsible for the degradation of the forest. Local people relate that forest guards do not report any cases of illicit felling of the trees if they are offered some money by the offenders. The attitude of the people to the DFO was conveyed to us by a very interesting local saying: *sar khanchha bhani bad halyo, badle sar khayo.* It means, literally, "the fence was put up to protect the crops, but the fence itself ate the crops." The message behind this saying is obvious.

Majarkhola*ko Ban*, Baitadi

Settlement and User Group

User Group Characteristics. Majarkhola is located in ward no. seven of Durgasthan VDC which is one of the 68 VDCs in Baitadi. The user group area is known as Ainchyakanda - after the name of one of the major hamlets here. The boundaries of the village, including the forest, are Dhand in the north, Shiunyapad in the south, Kamarjyuko Bungo in the east, and Lachhamarya in the west (Sketch Map 4). A total of 98 households are recognised as user group households. In spite of the relatively larger number of user group households spread throughout several settlements, the cast heterogeneity here is less pronounced -- only three castes are present. There are 79 households of *Brahmins* called Badu living in Maikharka, Tooda, Dobara, Ainchyakanda, Koirali, and Matyakhola. Dayal *Gaun* has 14 households of Bohra *Chhetris* and Khanyaula has five Lohar households. The predominant Badus play a leading role in all activities from decision-making to protection of the forest.

The people of Tooda, Maikharka, Dobara, and Ainchyakanda (who are closer to the forest) play an important role in decision-making and protection. They claim that the villagers of Dayal *Gaun* (Bohra) and Koirali (Badu) are not primary users. Bohras participate in

[18] In the long run, this kind of discrimination (although it is positive) may defeat the whole effort at protection and effective management of Koti *Gaunko Ban* since this could give rise to conflict among user group members.

protection activities, but do not share the responsibilities. Similarly, people of Koirali claim user rights but participate only occasionally in protection activities.

The seven hamlets of Ainchyakanda village are situated to the south and southeastern side of the forest. Maikharka and Tooda are the nearest hamlets (only 15 minutes' walk) and Koirali is farthest of all (about an hour's walking distance) from the forest (Sketch Map 4).

Nature of the Forest

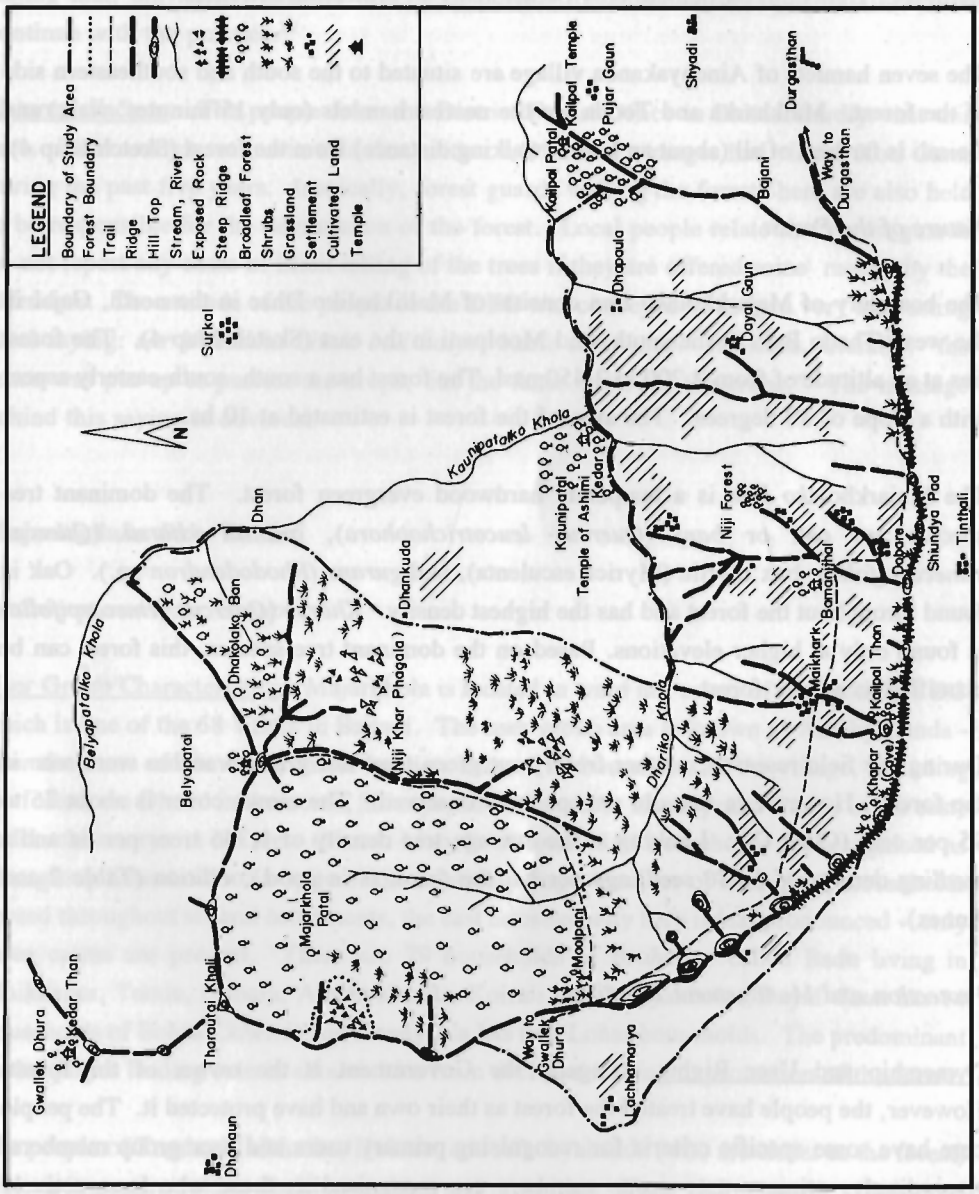
The boundary of Majarkhola*ko Ban* consists of Mallikhaliko Dhar in the north, Gajal in the west, Thado Bato in the south, and Moolpani in the east (Sketch Map 4). The forest lies at an altitude of from 2,200 to 2,450masl. The forest has a south, south-easterly aspect with a slope of 30 degrees. The area of the forest is estimated at 10 ha.

The Majarkhola*ko Ban* is a temperate hardwood evergreen forest. The dominant tree species are oak or *banj* (*Quercus leucotrichophora*), oak or *kharsu* (*Quercus semecarpifolia*), box myrtle (Myrica esculenta), and *gurans (Rhododendron* sp.). Oak is found throughout the forest and has the highest density. *Kharsu* (*Quercus semecarpifolia*) is found only at higher elevations. Based on the dominant tree species, this forest can be classified as an oak forest.

During our field research, neither freshly cut green trees nor green branches were seen in the forest. However, a few old stumps were observed. The crown cover is about 75 to 95 per cent (Class C_3). Looking at the average tree density of 1,346 trees per ha and a seedling density of 1,980 seedlings per ha, the forest is in good condition (Table 2 and Annex).

Protection and Management Practices

Ownership and User Rights. Legally the Government is the owner of the forest. However, the people have treated the forest as their own and have protected it. The people here have some specific criteria for recognising primary users and user group members. Accordingly, primary user group members are recognised as those who have actively participated in the protection of the forest; those households which fall within the traditional boundaries of the Majarkhola area; the descendants of traditional user group members who live within the area; and anyone who has migrated into the area and has established a permanent settlement by buying immovable property and agrees to abide by the existing rules and regulations of protection and management.



Map 4: Majarkhola, Baitadi, 1991

The user group of Majarkhola*ko Ban* includes all the villagers living in the seven hamlets of Ainchyakanda. However, in practice, the people of Tooda, Maikharka, Ainchyakanda, and Dobara are more active than those of Koirali and Dayal *Gaun* in all activities--from protection to benefit sharing.

Genesis and Development of Protection and Management. The history of Majarkhola*ko Ban* as a people-protected forest, and the identification of user groups, is said to have started from the time of the cadastral survey of 1938 (1995 B.S.). People recollect that, during this survey, a reputed and influential person of Maikharka registered the forest land in his name, which was not acceptable to his fellow villagers. They called a meeting and asked the individual to give up his claim on this forest land and proposed that it should be protected and managed by the villagers as common property. He accepted their proposal and thus the protection and management of Majarkhola*ko Ban* began and its user group came into existence.

According to the local people, there were only large but sparse varieties of oak trees in the beginning. Most of the forest area was shrubland consisting of berberry (*Berberis asiatica*), *ghangaru* (*Pyracantha crenulata*), and raspberry (*Rubus ellipticus*).

The meeting in 1938 was the first of its kind in which people had gathered to discuss the management and protection of land and forest for their common use. However, for almost a decade after that no significant progress was made. Sometime in 1949 a man named Jaya Datta Badu is said to have rekindled the idea. In order to convince the people to participate in the protection and management activities, he forwarded the following arguments.

- All the people of Ainchyakanda and the neighbouring villages were dependent on the Gwal *Lekh* forest which was not more than one hour's walking distance away, but the trail to Gwal *Lekh* was not safe.
- Another forest nearby, which was known as Belyapatal (a religious forest), was restricted from use, i.e., only dry branches and leaf litter could be collected. The religious restrictions and the limited access prevented people from getting forest products whenever they needed them.[19]

[19] People here regard the leaf litter from this forest as being of the best quality for compost manure-perhaps because it is from a religious forest. Women are not allowed to enter the forest during their monthly periods (for six days). Also one has to be barefoot to enter this forest.

Jaya Dutta Badu was successful in convincing the villagers, who then agreed to abide by the rules and regulations for the protection and management of Majarkhola*ko Ban*. He ensured forest protection and benefit-sharing among the people until his death in 1971 (2028 B.S.).

Since there was no formal committee for forest protection, a few people lopped the trees illicitly for fodder. Three years after the death of Jaya Dutta, villagers gathered to choose a leader. They requested the eldest son of the late Jaya Dutta Badu to become the leader and the same year he brought 500 seedlings of varieties of oak and wild strawberry from Gwal *Lekh* and also planted trees on the marginal lands of Majarkhola*ko Ban.*

During the following years, the stealing of fodder and firewood by neighbouring villagers, as well as the people of Majarkhola itself, was noticed. People felt that something needed to be done to prevent this. Thus, sometime in 1978, a general meeting of the user members was called in a local temple to deal with the cases of stealing. The people decided that each individual should take an oath. For this purpose, a bell from the temple was placed in the middle of the gathering. The household head or a member of the household had to swear (holding the bell in their hands), *"Neither I myself nor any member of my family have stolen forest products, including green leaf litter, from the forest. If we have done otherwise, may the deity punish my family".*

People who did not swear had to pay a fine of Rs 25. Most of the people confessed that they had stolen green products from the forest and paid the fine. Those who had not stolen any forest products also decided to contribute five rupees each to create a community fund. This fund has been used to buy cups, jugs, plates, carpets, and a tent for use by the user group members during ceremonials or ritual celebrations. The villagers also swore on the same day that they would not steal any forest products in the future.

At the same meeting, the first user group committee of Majarkhola*ko Ban* came into existence. There were seven members in this committee: two each from Dyal *Gaun* and Maikharka, and one each from Ainchyakanda, Dobara, and Tooda - all of whom were also members of the *panchayats* of ward nos. six and seven of the then Durgasthan Village *Panchayat*. The committee dissolved with the end of the *Panchayat* System. However, because of a strong sense of attachment to their forest, the people of Majarkhola have continued protection and management practices.

Organisation. The protection activities were started by an individual leader. There was no formal user group committee until 1978 (2035 B.S.). However, the formal committee

that came into existence at this time also happened to be tied to the local *panchayat* unit and, therefore, has not been effective after the fall of the *Panchayat* System. People have realised that they should constitute a new committee soon. At present, since there is no committee, all the user households have to come together to make decisions regarding enforcement of rules and regulations and collection of fines. The protection of trees was emphasised in the management of the forest and people claim that trees were planted in the forest some time in 1975.

Decision-making. Whenever there is a need to deal with a case of theft (of forest products -- tree fodder or green wood), or to determine the amount of a fine, or to make new rules and regulations regarding the protection and management of the forest, a general meeting of the user households is held in a public place or in the courtyard of the local temple. Decisions are made on the basis of verbal votes.

During the period when the formal committee existed, decisions on minor issues were made by the committee members. However, endorsement by a general meeting of the user group members was necessary in crucial matters.

Rules and Regulations. The following rules and regulations are in force in Majarkhola*ko Ban*.

- No one will cut green trees and branches without permission from the concerned people.
- Neighbouring villagers will be informed and prevented from encroaching on this forest.
- The user households will be allowed to collect leaf litter during a specified period every year -- falling between mid-January and mid-May
- Collection of dry wood for fuel and grazing of animals, apart from during winter snows and the rainy season, is permitted.
- No one is allowed to start a fire inside the forest area for any purpose.

Product-sharing: Meeting the Needs. At present, it is generally understood that everyone will be allowed to collect dry leaf litter and dry branches for fuelwood. Traditionally, the people of Tooda, Maikharka, Dobara, Ainchyakanda, as well as Dayal *Gaun* and Koirali, are recognised as user group members. Now the forest has reached harvesting stage (i.e., timber can also be removed from it) and conflicts regarding benefit-sharing have surfaced. Some people feel that the villagers of Dayal *Gaun* and Koirali (who, since they are farther away from the forest in comparison to others have been collecting leaf litter and dry fuel

only once in a while) should not have primary user rights. People have not had an open discussion on this issue so far. They intend to deal with this issue in the future. There is no conflict about product use by outsiders or the neighbouring villagers who do not qualify as primary users according to the local definition.

The people of Majarkhola have been meeting most of their timber needs from the government forest. Except for some agricultural implements (20% of the total requirement is met from the protected forest), no timber is extracted from Majarkhola*ko Ban*. Twenty per cent of the fuelwood supply and 50 per cent of the leaf litter collected every year comes from the protected forest.

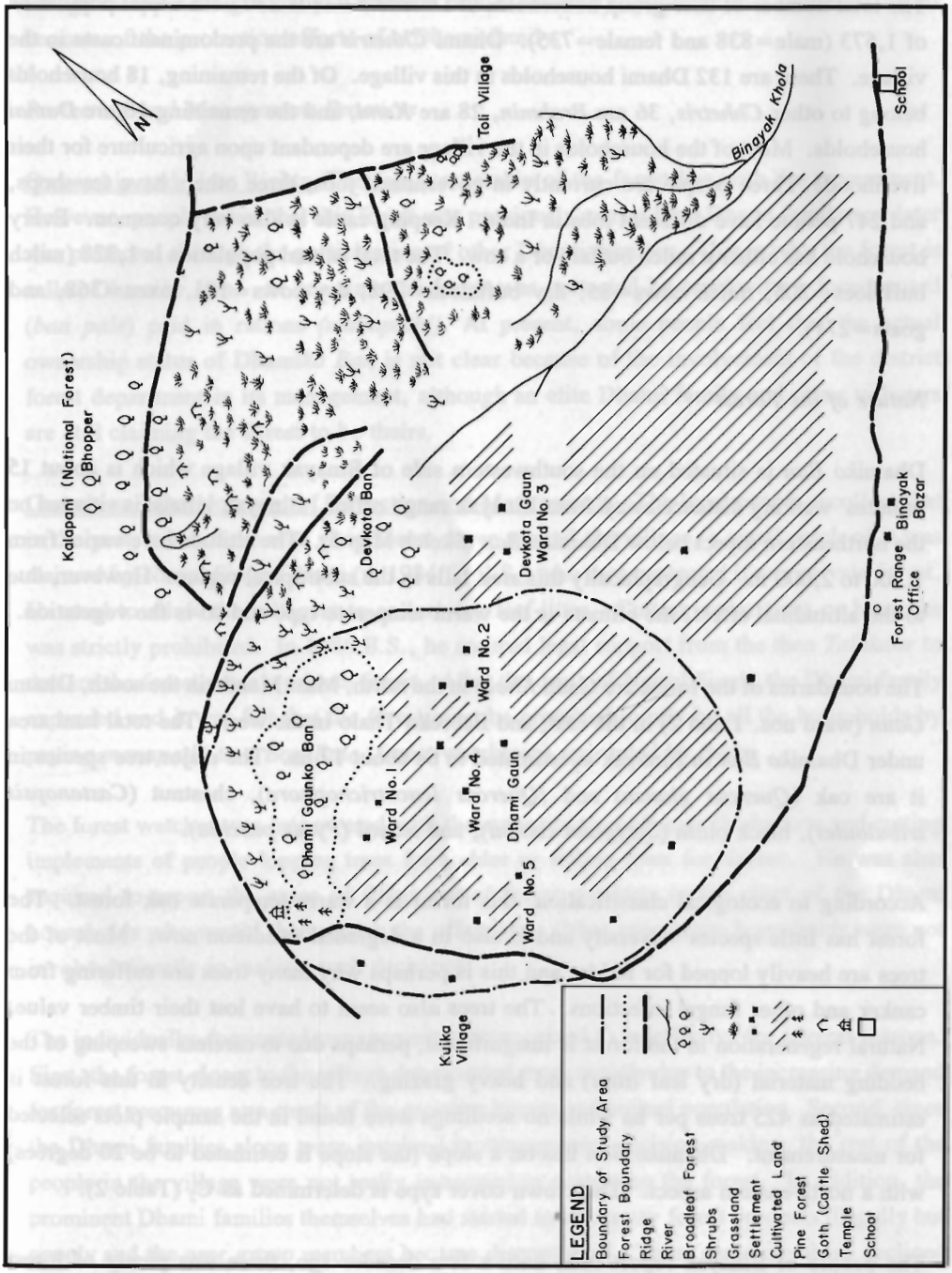
External Factors. Leaf litter is the most important product that people obtain from the forest. The onset of leaf litter collection is associated with a religious festival. There is a religious forest called Belyapatal of which *Kedar Devta* is the reigning deity. People in the vicinity of this forest are allowed to collect leaf litter and dry fuel during a specified period every year. However, Belyapatal becomes open for leaf litter collection only after *Shree Panchami,* a Hindu festival (Anderson 1988:230-232) which falls in January. The local priest blows his conch shell early in the morning on an auspicious day after the festival, and this marks the onset of leaf litter collection not only in Belyapatal but also in Majarkhola*ko Ban*. The forests remain open for all the users until the middle of June or the beginning of the monsoon, whichever comes first.

Some Pragmatic Strategies/Practices. The people of Majarkhola have been clearing the thorny bushes at regular intervals in the forest to allow for seedling regeneration. They have also planted trees. Allowing the collection of dry leaf litter, dry fuelwood, fruits, edible tubers, and medicinal plants within the rules and regulations agreed upon by all user group members may be regarded as the most pragmatic strategy of the people here.

Dhami*ko Ban*, Binayak, Achham

Settlement and User Group

User Group Characteristics. Binayak forms ward nos. one, two, and four of Binayak VDC which is situated in the middle hill region of the eastern part of Achham district, having Kuika VDC in the south and Poli VDC in the north (Sketch Map 5). The Karnali River is within three hours' walking distance towards the western side of the village.



Map 5: Dhami Gaun, Achaam, 1991

The total number of user group households of Dhami*ko Ban* is 230 with a total population of 1,573 (male=838 and female=735). Dhami *Chhetris* are the predominant caste in the village. There are 132 Dhami households in this village. Of the remaining, 18 households belong to other *Chhetris*, 36 are *Brahmin*, 28 are *Kami*, and the remaining 16 are *Damai* households. Most of the households in the village are dependant upon agriculture for their livelihood. Three people are currently in government jobs, three others have tea-shops, and 247 people have different jobs in India. Keeping cattle is also very common. Every household has either a milch buffalo or a cow. The total animal population is 1,328 (milch buffaloes=205, milch cows=85, dry buffaloes=298, dry cows=101, oxen=368, and goats=271).

Nature of the Forest

Dhami*ko Ban* is situated on the southwestern side of Binayak village which is about 15 minutes' walking distance away from Binayak range office. Binayak village is situated on the northeastern aspect below Dhami*ko Ban* (Sketch Map 5). The altitude here varies from 1,500 to 2,000 m. Geographically this area falls in the subtropical region. However, due to the altitudinal effect, the climate is the warm temperate type and so is the vegetation.

The boundaries of the forest are Gadh *Khola* in the north, Mast Mandu in the south, Dhami *Gaun* (ward nos. 1 and 2) in the east, and Babreko Thalo in the west. The total land area under Dhami*ko Ban* in Binayak is estimated to be about 17 ha. The major tree species in it are oak (*Quercus glauca*) and *(Quercus leucotrichophora*), chestnut (*Castanopsis tribuloides*), black plum (*Syzygium cumini*), and *mayal* (*Pyrus paschia*).

According to ecological classification, this forest is a warm temperate oak forest. The forest has little species' diversity and is also in a degraded condition now. Most of the trees are heavily lopped for fodder and this is perhaps why many trees are suffering from canker and other fungal infections. The trees also seem to have lost their timber value. Natural regeneration in the forest is insignificant, perhaps due to careless sweeping of the bedding material (dry leaf litter) and heavy grazing. The tree density in this forest is estimated as 425 trees per ha while no seedlings were found in the sample plots selected for measurement. Dhami*ko Ban* lies on a slope (the slope is estimated to be 20 degrees) with a north-eastern aspect. The crown cover type is determined as C_2 (Table 2).

The people of Binayak report that, until a few decades ago, there was plenty of forest around the village. The status of Dhami*ko Ban* was also very good in terms of the stock and wildlife population as well as tree species' diversity. While the forest around the

village disappeared gradually, Dhami*ko Ban* exists today (although in a degraded form) because of the protection efforts of a Dhami family.

Protection and Management Practices

Ownership and User Rights. The legal ownership of the forest lies with the government. However, people assert that this forest was previously owned by a Dhami family and later was protected through the participation of other Dhami families. This is why the forest is called Dhami*ko Ban*. At one time the forest was protected by employing a forest guard (*ban pale*) paid in rations *(manapathi)*. At present, some people feel that the actual ownership status of Dhami*ko Ban* is not clear because of the involvement of the district forest department in its management, although an elite Dhami family and other villagers are still claiming the forest to be theirs.

Genesis and Development of Protection and Management. The local people recollect that in the past, when there was good forest cover around the village, a small patch of it was claimed by Nawal Singh Dhami (in 1984/85 B.S.) who then protected it as a private forest. He used to allow the villagers to collect dry leaf-litter. Cutting green trees or branches was strictly prohibited. In 1986 B.S., he secured legal support from the then *Talukdar* to declare the forest patch a private forest. After the death of Nawal Singh, the Dhami family expanded and it was felt that the forest must be protected jointly by all the households by paying *manapathi* to a *Ban Pale* (forest watchman) appointed by them.

The forest watcher was empowered with the authority to confiscate the baskets and cutting implements of people lopping trees for fodder or felling trees for timber. He was also required to report the cases of illicit use of forest products to the chief of the Dhami households who would then punish the offenders. Other user group households were not involved directly in making such decisions.

The individually-dominated management system ceased to be effective for several reasons. First, the forest closer to the village deteriorated more rapidly due to the increasing demand for forest resources as a result of the growing human and animal population. Second, since the Dhami families alone were involved in management decision-making, the rest of the people in the village were not really interested in protecting the forest. In addition, the prominent Dhami families themselves had started to take away forest products illegally but openly and the user group members became discontented. Thus, some members declined to pay *manapathi* to the *ban pale* because forest resources had been exploited heavily and there was little left to protect.

However, at this crucial point, another leader -- the ex-*Pradhan Pancha*, Dil Bahadur Dhami--and an influential personality of the village came up with an interesting plan in 1985 (2042 B.S.). Accordingly, he requested the Binayak Range Office to undertake tree plantation on a small piece of marginal land adjoining the forest (i.e., have a *Panchayat* Protected Forest in the village) and also to define the forest boundaries. His idea was to share the responsibility for the protection of Dhami*ko* Ban with the District Forest Office. This would be possible since they would now appoint a forest guard for the PPF who would naturally also watch the Dhami*ko Ban.* Besides, the encroachment on the forest by the local people would also be checked because of the government forest guard. Unfortunately, this also proved to be an *ad hoc* arrangement. After the fall of the *Panchayat* System, alternative measures had to be taken. Therefore, the people again appointed their own *ban pale* who is being paid in *manapathi.*

Organisation and Decision-making. No formal UGC has existed here -- neither in the past nor at present. Most of the decisions are made by a single Dhami leader while all the users participate in paying *manapathi.*

Since there is no formal organisation controlling the protection and management of Dhami*ko Ban,* decisions or other strategies regarding the forest are made by local elites rather than by villagers.

The reason for the non-existence of any structural organisation, even at present, might be because Dil Bahadur Dhami is considered to be a trustworthy and responsible person and because he was the *Pradhan Pancha* of the same *panchayat* until recently. Perhaps the *panchayat* was accepted as an organisation that looked after the forest in this village People here are not yet used to community meetings to discuss the issues related to forest protection and management. The people here seem happy with an individual leader taking these responsibilites for them. Participation of the people in decision-making is yet to be seen.

Rules and Regulations. There is no clear set of rules and regulations for the protection and management of Dhami*ko Ban.* In principle, no forest products (except grass) may be removed from the forest without prior approval. People are aware of the consequences of the degradation of their forest and, therefore, are striving to have a set of rules and regulations for the effective management of Dhami*ko Ban.*

Product-sharing: Meeting the Needs. Utilisation of forest resources is limited to certain products such as dry leaf litter, collection of dry firewood, and the forest is also open for

grazing (for ward nos. 1, 2, and 4 throughout the year). It was found that because of the absence of clear-cut objectives and the lack of a management plan, provisions for systematic extraction and utilisation of products do not exist. Consequently, people have resorted to the illegal harvesting of forest products to fulfil their demands for fodder, fuelwood, and timber. Of course, the users living near the forest derive more benefit than people living far from it.

Most of the bedding material required for the cattle is obtained from the forest and other sources. A good proportion of the fuelwood and fodder demand is met by the trees on private farmlands. The rest of the fuelwood and fodder supply comes from a government forest on the *lekh* (cliffs) called Bhabar.

External Factors. There is little availability of forest products from this forest at present. Perhaps, due to this fact, the external population pressure on the forest is also very little

Occasionally, the people of Kuika visit the forest for fodder, bedding material, and fuelwood. The pressure from external agencies (i.e., market factor) is also not felt because of the presence of Bhabar as an alternative source of forest resources.

Some Pragmatic Strategies/Practices. Some people have private forest patches. In addition quite a few people also have fodder trees on their private farms.

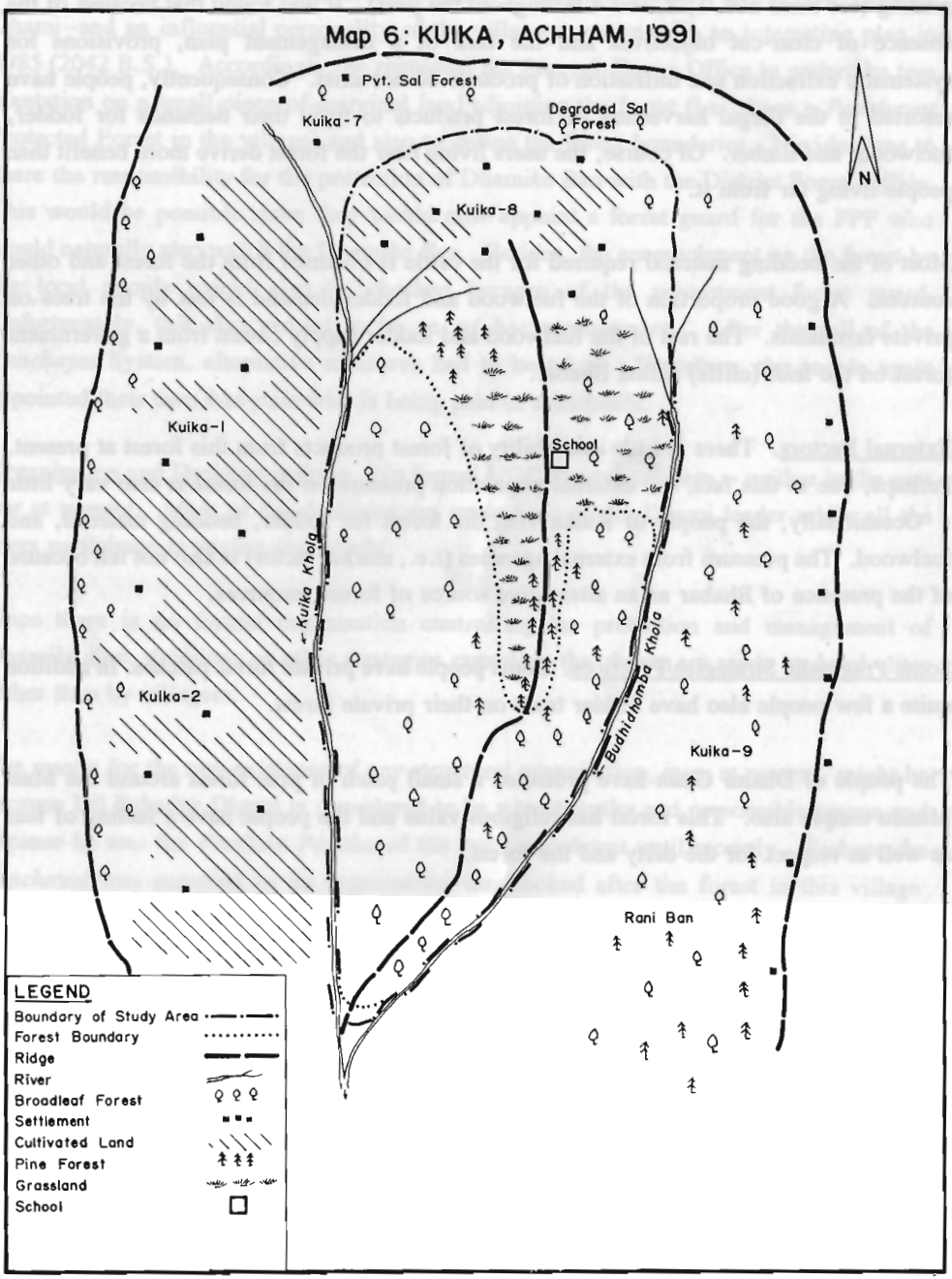
The people of Dhami *Gaun* have protected a small patch of pine forest around the Mast Mandu temple also. This forest has religious value and the people have a feeling of fear as well as respect for the deity and the forest.

Kalapani*ko Ban*, Kuika, Achham

Settlement and User Group

User Group Characteristics. The Kuika Village Development Committee lies in the east of Achham district sandwiched between Chalsa VDC in the south, Binayak VDC in the north, and Sayah in the east. The Karnali River is about two and a half hours' walking distance from Kuika (Sketch Map 6).

The primary users of Kalapani*ko Ban* are the inhabitants of Thulasen village within Kuika VDC. Of the 66 households in the village, 60 households are *Brahmins* (Dhakal and Timilsena). The total population of the user group households is 374 (183 male and 191 female). The settlement pattern here is moderately clustered.


Map 6: KUIKA, ACHHAM, 1991
Pvt. Sal Forest
Degraded Sal Forest
Kuika-7
Kuika-8
Kuika-1
Kuika-2
Kuika-9
School
Kuika Khola
Budhidhomba Khola
Rani Ban
N
LEGEND
Boundary of Study Area
Forest Boundary
Ridge
River
Broadleaf Forest
Settlement
Cultivated Land
Pine Forest
Grassland
School

Almost all the user households are subsistence farmers. More than 50 men from this village are currently in India, engaged in different occupations. Most households own at least one buffalo, one cow, and a pair of oxen. The total animal population here is 334 (buffaloes=115, cows=55, oxen=101, and goats=63). The domestic animals have multiple uses.

Nature of the Forest

The Kalapani forest is situated on the east and southeastern edge of the border of ward number eight of Kuika in Thulasen village. Kalapani*ko Ban* is a *sal (Shorea robusta)* forest distributed around a tongue-like ridge projecting southwards and ending with a steep slope on the northeastern bank of Kuika *Khola* and the western bank of Budhidhamba *Khola* (Sketch Map 6). The aspect of the forest varies from east to southwest, while the average slope is estimated to be 30 degrees.

The Kalapani*ko Ban* is estimated to have an area of about 29 ha with *sal (Shorea robusta)* as the predominant species, followed by pine. Other species available here are black plum (*Syzygium cumini*), *sindure* (*Mallotus philippinensis*), *kyamun* (*Syzygium cerasoides*), and *dhairo* (*Woodfordia fruticosa*). According to ecological classification, this forest can be categorised as subtropical *sal (Shorea robusta)* forest--elevation ranges approximately from 1,000m to 1,250m. This forest is said to have been protected since 1981 and currently its stocking status is very good. There are a few mother *sal* trees while most of the site is occupied by newly regenerated saplings and seedlings. At present the forest is well protected and the growth is vigorous. The tree density in Kalapani*ko Ban* is 4,312 trees per hectare while the seedling density is 6,743 seedlings per hectare. The canopy class for this forest is C_3 (Table 2).

Adjoining the Kalapani forest is a pine forest with approximately five hectares of land. It has been registered in the name of a middle school located nearby. The school's pine forest has some old pine trees with the understorey occupied by newly regenerated saplings and seedlings. Most of the old pine trees have been chipped on the trunk to extract resin saturated wood *(choilo)* which is used by the local people for lighting purposes.

Protection and Management Practices

Ownership and User Rights. The Kalapani*ko Ban* is a government forest although since 1981 it has been protected by the local community which has appointed a keeper (*heralo*) who is paid in rations by the people of Thulasen. Now a formal user group committee has

been constituted by the local people under the supervision of the ranger at Binayak. However, legally the forest has not been handed over to the user group.

The people of Thulasen village, ward number eight of Kuika VDC, are the primary users and protectors of this forest. In addition, a few households from ward number seven within Thulasen village are also included as user households. Participation of a household in the protection activities, its access to alternative sources for forest products, and its proximity from Kalapani*ko Ban* are the main criteria used to define user group membership and user rights.

Genesis and Development of Protection and Management. The history of the protection and management of the forest is only about ten-years old. The forest is in the sapling stage. Currently the forest resources are limited but the users seem very enthusiastic and optimistic about their protection and management activities.

According to some elderly villagers, this forest was in good condition until about 60 years ago. Its exploitation began as the local population grew in size and the lack of protection and lack of a proper management system were felt. In 1952 (2009 B.S.), a permit system was implemented here for the first time. Later on, as resources had been deteriorating there was difficulty in obtaining fodder, fuelwood, and other forest products. As a result, the forest was declared to be under the supervision of foresters from where collection (or harvesting) of forest products was restricted. The pressure for meeting the basic needs for bedding materials and other dry products fell on another forest -- the *Rani Ban* (Queen's Forest) near the village to the south east of Kuika.

Slash and burn agriculture (*khoria phadani)* was also common until the 1950s but was later controlled because in 1952 (2009 B.S.), the then *Bahidar*, Devanand Jaisi, stated that the forest should be protected. This also proved to be a temporary relief only since people started disobeying the rules and, more importantly, the *Bahidar's* family members themselves violated the rules.

The forest was degraded heavily at the beginning of the 1960s. However, no one took any notice since alternative sources of forest resources existed nearby. In 1973 (2030 B.S.) a joint attempt to protect the forest was made by the people of all wards of Kuika and Chalsa (formerly a single *panchayat*) by appointing a watchman who was remunerated in kind. However, this also failed to arrest the process of destructive use of the forest. In 1978 a new watchman was appointed by the people of ward numbers seven, eight, and nine only, but he was dismissed three years later due to internal problems.

Thus, we see that there were several attempts to protect and manage Kalapani*ko Ban* by the people of Kuika. Finally, the people of Thulasen (ward no. 8 of Kuika VDC) realised that they should be the ones to protect this forest. In 1983, they had a meeting and decided to appoint a forest guard from their own village. The people from ward number seven were also included as users although they were not invited to the meeting. The new forest guard, Maniram Dhakal, was also paid in rations by the people of both ward numbers seven and eight.

Organisation. In 1990 (after the declaration of democracy in Nepal), a Forest Protection Committee was formed by the ranger at Binayak. The watchman, Maniram Dhakal, has been its chairman and there were eight other members on the committee.

Thus, at present, there is a formal organisation -- a committee for the protection and management of this forest. The user group of this forest has decreased from the whole of Kuika *Panchayat* to only Thulasen village now. Although people from ward number seven are recognised as users, they are not represented on the current user group committee. The role of women was found to be less important than men in decision-making in regard to protection and management of the forest.

Decision-making. The recently formed user group committee has been entrusted with the task of decision-making. Whenever important decisions are made, a general meeting of the user group members is called and the decisions are conveyed to them. The general meeting may accept the decisions or may suggest changes.

Rules and Regulations. Since the forest is only ten years old, it has not reached the stage of product use other than the use of leaf litter and grass. According to the current rules, no one is allowed to fell any existing trees or saplings in the forest.

Leaf litter has to be collected during a specified time of the year. No leaf litter can be collected during the period from mid-June to mid-September. Grazing is also allowed in the forest from mid-November to mid-May. However, the people do not, as yet, have rules and regulations for dealing with the offenders.

Product-sharing: Meeting the Needs. The Kalapani Budhidhamba forest is in the sapling stage. The regeneration is enormous -- mostly *sal* and some other species. Women and children go to the forest to collect dry leaf litter in bamboo baskets (*dokos*) or nets made with the fibre from *bhimal* (*Grewia oppositifolia*) skin; apart from the period of restricted months.

In this village, most of the people have a number of trees on their private farms. Thus, 80 per cent of the fodder, 75 per cent of the fuelwood, and 15 per cent of the leaf litter requirements are met from the trees on the farms.

External Factors. The ranger's office at Binayak influences the protection efforts of the people of Kuika. There is some stealing from the forests by the neighbouring villagers. During our visits to the forest we observed that the *sal (Shorea robusta)* saplings were lopped in many places. We later learned that this was because of stealing by people from ward numbers one, two, and nine who came there early in the morning to steal fodder and other forest products. It was also found that during the *panchayat* period, at one time, the *Pradhan Pancha* of Kuika had made attempts to declare this forest to be the common property of Kuika Village *Panchayat* as a whole. This was not accepted because the people of ward numbers seven and eight consistently opposed such attempts, thereby claiming the forest to be "theirs" only.

There is an inherent conflict regarding ownership among the people of Kuika. The strongest claim to the forest is emerging from the people of ward numbers one and two who do not want any products from the forest at present but certainly want to harvest timber in the future. They have been offering to provide rations for the watchman. Time alone will tell how this issue of ownership and resource use from Kalapani*ko Ban* will be resolved.

Some Pragmatic Strategies/Practices. Anyone who notices a fire in the forest is supposed to extinguish it. If it is too wild to be controlled by one or two people, they should seek the help of other villagers.

Leaf litter is swept very carefully. We noticed that there is a conscious attempt to allow for the germination of the seeds, as well as to save the seedlings in the forest, by restricting the use of forest products during certain months. Most of the fodder requirements of the village are provided by fodder trees from the farmland and the crop residues from their agricultural land.

Bhatwada*ko Ban*, Achham

Settlement and User Group

User Group Characteristics. Bhatwada is located at about half an hour's walking distance to the east of Mangalsen, the district headquarters of Achham. The forest and the village

are within ward number seven of Mangalsen VDC (Sketch Map 7). The forest is not very far, about 10 minutes' walking distance away from the village. The climate of this area is warm and temperate and the altitude ranges from 1,800m (at Mangalsen) to 2,300m.

The total number of user households is 99 with a total population of 676 (male=365 and female=311). The number of households according to caste is as follows: Bhat = 79, Bista and Kunwar = 9, *Damai* and *Kami* = 9, and Tamatta = 2[20].

Almost all households are dependent on farming/agriculture. Eighteen individuals from the village are in government jobs, 26 are working in India, and one household has a retail shop in Mangalsen bazaar.

The service castes such as the *Damai* and *Kami,* have small landholdings and, therefore, mostly depend on tailoring and repairing iron tools respectively. The Bhats and others pay the *Damai* and *Kami* for their services with grain.

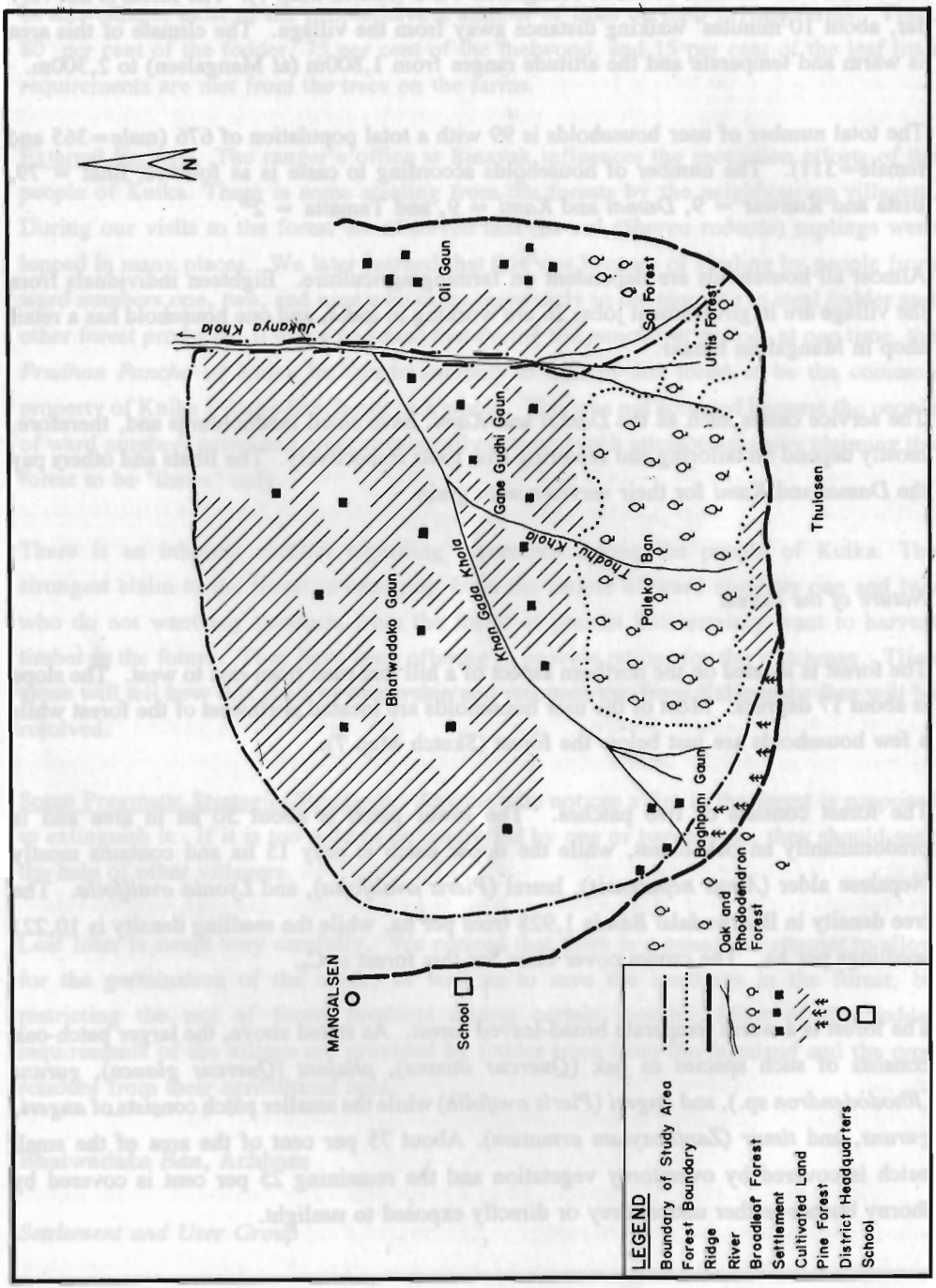
Nature of the Forest

The forest is located on the northern aspect of a hill that runs from east to west. The slope is about 17 degrees. Most of the user households are located northwest of the forest while a few households are just below the forest (Sketch Map 7).

The forest consists of two patches. The lower patch is about 50 ha in area and is predominantly an oak forest, while the upper patch is only 15 ha and contains mostly Nepalese alder (*Alnus nepalensis*), laurel (*Pieris ovalifolia*), and *Lyonia ovalifolia.* The tree density in Bhatwada*ko Ban* is 1,928 trees per ha, while the seedling density is 10,221 seedlings per ha. The crown cover class for this forest is C_3.

The forest is a warm temperate broad-leaved forest. As stated above, the larger patch-oak consists of such species as oak (*Quercus incana*), *phalant (Quercus glauca*), *gurans* (*Rhododendron* sp.), and *angeri* (*Pieris ovafolia*) while the smaller patch consists of *angeri, gurans*, and *timur* (*Zanthoxylum armatum*). About 75 per cent of the area of the small patch is covered by overstorey vegetation and the remaining 25 per cent is covered by thorny bushes--either understorey or directly exposed to sunlight.

[20] Names in ordinary font are Nepali surnames, names in italics are caste names which are used as surnames.



Map 7: Bhatwada, Achham, 1991

The boundaries of the oak forest are defined by the *lekhko* agricultural land of Bhatwada in the east, a small stream between the forest and the village in the west, ward number six of Mangalsen in the south, and a stone wall between the forest and the agricultural land in the north. The boundary of the smaller patch consists of a small stream separating Woli VDC and Mangalsen VDC in the east, ward number six of Mangalsen and the oak forest in the west, Bhatwada*ko Lekh* in the north, and a trail separating Woli *Ban* and Bhatwada*ko Ban* in the south (Sketch Map 7)

Protection and Management Practices

Ownership and User Rights. Although the forest is legally a government forest, the management is confined to the village level by the user group of Bhatwada. In 1987 (2044 B.S.) the people of Bhatwada formed a user group committee entrusted with the task of protection and management of this forest. While the research team was in the field, the people here were in the process of gaining formal recognition of their user group committee, having drawn up a management plan with the help of the DFO. Their management plan was in the process of approval.

The user group consists of households in Bhatwada (ward no. 7 of Mangalsen) whose members have been protecting and managing this forest while also living in close proximity to it. The user group committee members are selected from among the users on the basis of their expressed interest in the management activities.

Genesis and Development of Protection and Management. It is said that once there was a huge forest stretching west to east all the way from Mangalsen to Woli. Encroachment started and accelerated later due to the mounting pressure on the forest resources (for fuel and timber, as well as land reclamation for agriculture) because of the growing population in the area. A couple of generations ago, one of the grandfathers of the local Bhat families became concerned that, if the forest in this area was not managed properly, his descendants might not be able to meet their daily needs in forest products. The Bhat families, therefore, came together and reached an agreement that they should do something to protect and manage the forest. A watchman was appointed by the villagers and paid in rations.

In 1987, with technical advice from the forest department personnel in the district, the users of Bhatwada*ko Ban* organised a formal committee. The forest was also compartmentalised--divided into two parts. One half of the oak forest and the *Alnus-Lyonia* forest is currently declared open for the collection of leaf litter, fuelwood from dry or dead branches of the trees, for grazing, and for timber products, as and when needed by the

users, while the other half is closed in order to allow for regeneration. The people told us that the closed half will be opened after five years if the regeneration and the growth in this part of the forest is felt to be satisfactory (i.e., if most of the saplings attain sufficient growth to protect them from destruction by grazing animals), while the other half will be closed.

Organisation. The users of Bhatwada are now in the process of legitimising the forest as a community forest. A formal user group committee, consisting of seven members (no females), was formed in December 1990 in the presence of the DFO. Since females do have a significant role to play in the protection and management of forests, and this was recognised by the people here, another general meeting was held again in the presence of the DFO in mid-February 1991 (when the research team was still in the field), and the committee was expanded to 12 members, including three female members. The new committee is working now to protect and manage this forest which is about 65 ha. If a member dies or migrates, or is absent from the meetings for a long time, a replacement is made.

Decision-making. According to the draft of the management plan prepared and submitted to the DFO's office at Mangalsen, decisions will be made with the consensus of members, time intervals between two meetings will not be more than one month, at least 50 per cent of the committee members must be present during the meetings, and the decision-making role of women must be fully recognised. The decision-making process is broad-based and includes a set of rules and regulations for management.

The most common issues raised in meetings concern the protection and management of the forest--if the committee feels that they cannot handle a particular issue or case by themselves, they convene a general meeting of the user group members.

Rules and Regulations. There does not seem to be any specific rule regarding the distribution of products. The general rule is that people can collect the permitted products according to their needs and capacity. Generally, those living nearby tend to collect more products than those living farther from the forest. Whatever rules exist may be distinguished as rules regarding regeneration and protection. The oak forest has been divided into two parts -- one part is opened while the other is closed to ensure regeneration. The practice of opening and closing parts of the forest in periodic rotation ensures a sustainable supply of forest resources. In addition, there is a watchman and if he catches someone stealing restricted products and reports the case to the UGC, the committee penalises the individual.

Product-sharing: Meeting the Needs. Leaf litter is collected during the leaf shedding season -- mid-January to mid-June. Fuelwood in the form of dead and dry branches can be collected throughout the year. Grazing is also allowed throughout the year. Extraction of timber is allowed only under special circumstances for house construction (in case of fire or landslides when a house needs to be rebuilt).

Most people have red cedar (*Toona ciliata*) trees on their own farmlands and these fulfil 75 per cent of their timber needs. The farmlands also meet 65 per cent of the fodder and 30 per cent of the fuelwood needs of the people of Bhatwada. However, 80 per cent of the bedding material and leaf litter and 10 per cent each of the fuelwood and timber requirements come from the protected forest.

External Factors. The people of Bhatwada claim that the forest is theirs. However, the open part of the forest is accessible to other people living not far from there who could be regarded as secondary users--they are allowed to collect leaf litter, dry branches as firewood, and also to graze their animals.

There is no dispute so far in sharing benefits among other villagers. In order to meet the requirement for forest products, the users of this forest do have alternative sources -- trees on their private farmland and also a large forest belonging to ward no. 6 of Mangalsen VDC.

Some Pragmatic Strategies/Practices. People try to control forest fires. The most pragmatic strategy of the people of Bhatwada is, however, the division of Bhatwada*ko Ban* into two sections. By closing one half of the forest for a few years they have shown their commitment to proper management and sustainable use of their forest resources.

There is a strong community orientation among the people of Bhatwada. Members from each and every household are represented at any kind of community-level celebration or gathering. In addition, there is a "Bhatwada Service Committee" which also takes a lead role in carrying out development-related activities in the village.

Siddheswori*ko Ban*, Achham

Settlement and User Group

User Group Characteristics. Siddheswori is a predominantly Kunwar *Chhetri* settlement. It consists of ward numbers one, two, and three of Prabha VDC (Prabha is the name of

one of the villages nearby). There is a higher secondary school, a health post, and a nearby market facility at Sanfe Bagar, which also has the only airstrip in the district (Sketch Map 8). There are 128 user group households with a total population of 746 people (male=369 and female=377). Of the total number of households, 104 are Kunwar *Chhetri*, eight are Bhul, seven are *Lohar*, and the remaining are other *Chhetris* and *Brahmins*.

Most of the users are subsistence farmers. Only six persons are in government jobs and 41 persons are employed in India. Three households have tea-shops, eight have retail shops, two have rice and oil mills, and one person has a medicine shop in Sanfe Bagar bazaar.

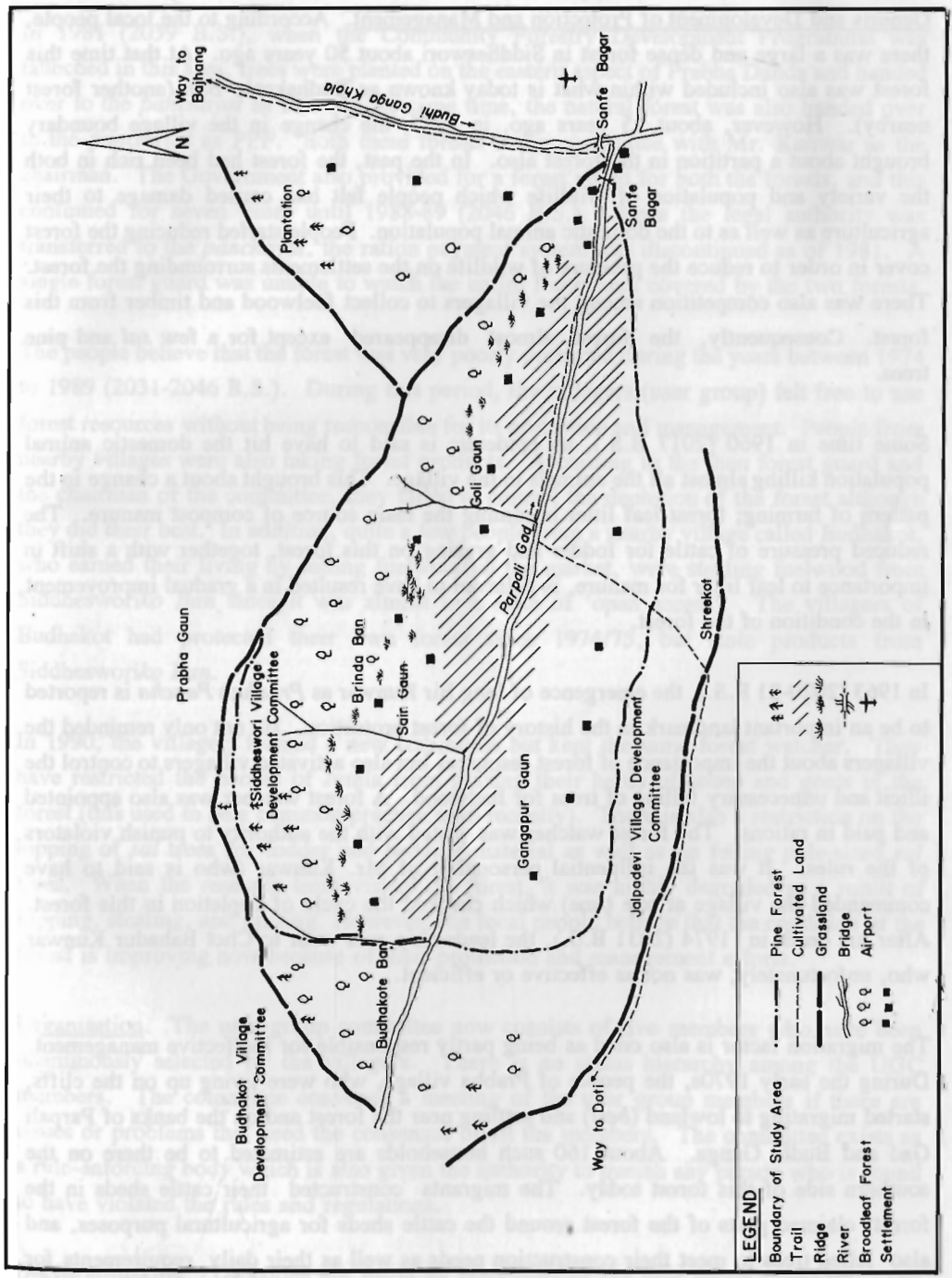
Nature of the Forest

Siddheswori*ko Ban* -- a *sal* forest is also locally known as *Brinda Ban*. It is situated to the west of Sanfe Bagar airport, about half an hour's walking distance away. The forest lies on the southern aspect of Siddheswori hill on a 28 degree slope. The forest lies at an altitude ranging from 580m to 1,000m and the climate is tropical. The forest has two parts, the lower part consisting of a degraded pure *sal* forest while the upper part has both *sal* and pine in degraded conditions. Its boundaries are ward numbers seven and eight in the east; four, five, and six in the north; two and three in the south; and Budhakot VDC in the west (Sketch Map 8).

The forest area is approximately 84 ha surrounded by user group households; apart from on the western side (Sketch Map 8). It provides all kinds of major products such as timber, fuelwood, fodder, bedding material, and fruit in limited amounts. The tree density in this forest is 979 trees per hectare while the seedling density is 5,623 seedlings per ha. The canopy class is C_1. Although the forest is highly degraded, the seedling density is an encouraging sign that the condition of the forest could improve in the future.

Protection and Management Practices

Ownership and User Rights. The forest is legally a government forest, but, in practice, it is owned by the villagers who have a passive user group committee. Siddheswori forest is used by everyone from Siddheswori, although the protection and management committee consists of representatives from Gangapar *Gaun* (ward no. 1), Sain *Gaun* (ward no. 3), and Goli *Gaun* (ward no. 2). The forest guard also receives his remuneration from households in these three villages.



Map 8: Siddheswori, Achham, 1991

Genesis and Development of Protection and Management. According to the local people, there was a large and dense forest in Siddheswori about 50 years ago. At that time this forest was also included within what is today known as Budhakot*ko Ban* (another forest nearby). However, about 15 years ago, in 1977, the change in the village boundary brought about a partition in the forest also. In the past, the forest had been rich in both the variety and population of wildlife which people felt had caused damage to their agriculture as well as to the domestic animal population. People started reducing the forest cover in order to reduce the pressure of wildlife on the settlements surrounding the forest. There was also competition among the villagers to collect fuelwood and timber from this forest. Consequently, the forest almost disappeared except for a few *sal* and pine trees.

Some time in 1960 (2017 B.S.), an epidemic is said to have hit the domestic animal population killing almost all the animals in the village. This brought about a change in the pattern of farming; forest leaf litter becoming the main source of compost manure. The reduced pressure of cattle for fodder and grazing on this forest, together with a shift in importance to leaf litter for manure, is believed to have resulted in a gradual improvement in the condition of the forest.

In 1963 (2020-21 B.S.), the emergence of Jang Bir Kunwar as *Pradhan Pancha* is reported to be an important landmark in the history of forest protection. He not only reminded the villagers about the importance of forest resources but also activated villagers to control the illicit and unnecessary felling of trees for fuelwood. A forest watcher was also appointed and paid in rations. The forest watcher was vested with the authority to punish violators of the rules. It was the influential personality of Mr. Kunwar (who is said to have commanded the village at one time) which checked the cycle of depletion in this forest. After his death in 1974 (2031 B.S.), the leadership role went to Chet Bahadur Kunwar who, unfortunately, was not as effective or efficient.

The migration factor is also cited as being partly responsible for ineffective management. During the early 1970s, the people of Prabha village, who were living up on the cliffs, started migrating to lowland (*besi*) and settling near the forest and on the banks of Parpali Gad and Budhi Ganga. About 160 such households are estimated to be there on the southern side of this forest today. The migrants constructed their cattle sheds in the forest, claimed parts of the forest around the cattle sheds for agricultural purposes, and also felled trees to meet their construction needs as well as their daily requirements for fuelwood. Consequently, about one-third of the land area previously under forest was settled as farms by the migrants, leading to the depletion of forest resources.

In 1981 (2039 B.S.), when the Community Forestry Development Programme was launched in this area, trees were planted on the eastern aspect of Prabha Danda and handed over to the *panchayat* as PF. At the same time, the natural forest was also handed over to the *panchayat* as PPF. Both these forests had a committee with Mr. Kunwar as the chairman. The Government also provided for a forest guard for both the forests, and this continued for seven years until 1988-89 (2046 B.S.). Since the legal authority was transferred to the *panchayat*, the ration payment system was discontinued as of 1981. A single forest guard was unable to watch the entire forest area covered by the two forests.

The people believe that the forest was very poorly protected during the years between 1974 to 1989 (2031-2046 B.S.). During this period, the villagers (user group) felt free to use forest resources without being responsible for its protection and management. People from nearby villages were also taking forest products. According to the then forest guard and the chairman of the committee, they failed to control the depletion of the forest although they did their best. In addition, quite a few people from a nearby village called Budhakot, who earned their living by selling fuelwood in the market, were stealing fuelwood from Siddheswori*ko Ban* since it was almost in a state of 'open access'. The villagers of Budhakot had protected their own forest since 1974/75, but stole products from Siddheswori*ko Ban*.

In 1990, the villagers formed a new committee but kept the same forest watcher. They have restricted the people of Jumla from grazing their herds of sheep and goats in the forest (this used to be a common practice until recently). There is also a restriction on the lopping of *sal* trees for fodder and bedding material as well as on felling pole-sized *sal* trees. When the research team visited the forest, it was highly degraded as a result of lopping, stealing, and grazing. However, the local people believe that the condition of the forest is improving now because of their protection and management efforts.

Organisation. The user group committee now consists of five members who have been unanimously selected by the villagers. There is no status hierarchy among the UGC members. The committee convenes a meeting of the user group members if there are issues or problems that need the consensus of all the members. The committee exists as a rule-enforcing body which is also given the authority to punish any person who is found to have violated the rules and regulations.

Decision-making. Decisions are made by consensus of the user group members. The women have no role in decision-making. They follow the decisions made by the male members. Whenever they are in urgent need of forest products, fuelwood, and fodder in

particular, they do not hesitate to take them from the forest by lopping the lower branches of the trees (most of the trees were observed to have been pruned).

Rules and Regulations. Under the present set of rules and regulations, felling trees from the forest for timber requires the prior approval of the committee before securing a permit from the DFO. The collection of green wood for fuel and the lopping of trees for fodder are prohibited. The forest guard has to report the cases of illicit use of forest products to the committee. The violators pay a monetary fine (the amount is assessed by the committee), part of which is used to pay the forest guard as an incentive. Collection of grass and leaf litter is carried out during specified periods.

Product-sharing: Meeting the Needs. All kinds of major forest products are obtained from this forest. Timber is obtained by securing an authorisation letter or permit from the forest office to fell a tree. Fuelwood, fodder, and bedding material are generally collected by women and children, while timber collection is carried out by men.

People living closer to the forest use more forest products than others. The users take maximum advantage of the forest. This makes the forest watcher and his task of protecting the forest less effective.

An average household meets 70 per cent of its fodder requirements, 20 per cent of its fuelwood requirements, and 40 per cent of its leaf litter requirements from trees on farmlands. The protected forest is also heavily used (Table 4).

External Factors. The market at Sanfe Bagar is partly responsible for the illicit removal of forest products. Fuelwood is sold by some people in Siddheswori in the market.