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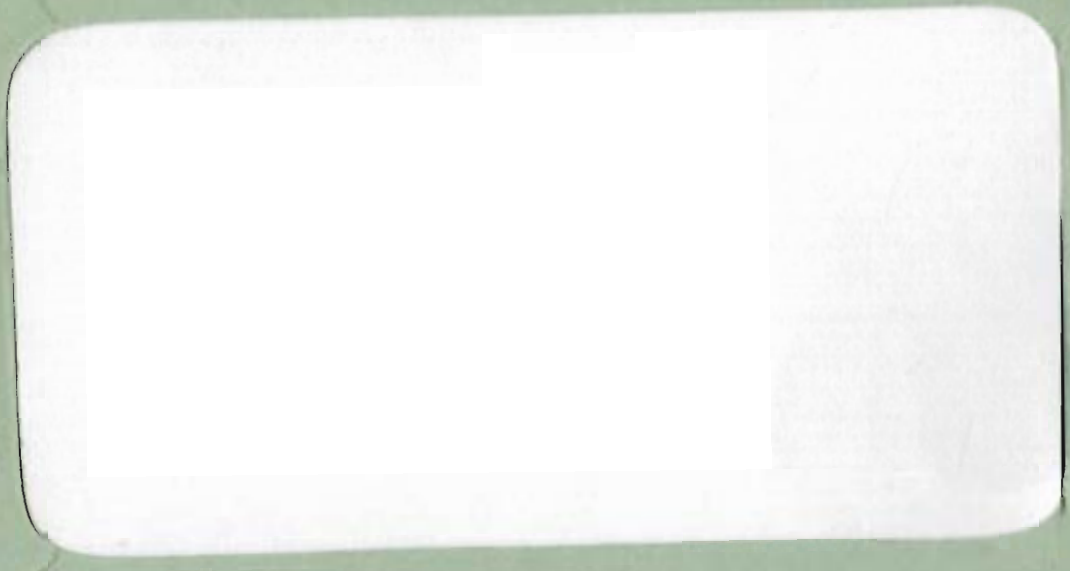
Discussion Paper Series

THE MANAGEMENT OF FOREST RESOURCES IN SINDHU PALCHOK AND KABHRE PALANCHOK DISTRICTS OF NEPAL

Robert J. Fisher,
Hukum Bahadur Singh, Deepak R. Pandey,
and Helmut Lang

MPE Series No. 8

International Centre for Integrated Mountain Development



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Dr. Robert J. Fisher was a Social Scientist with the Nepal-Australia Forestry Project at the time of the study. Hukum B. Singh and Deepak R. Pandey were employed as study team members under special arrangement with ICIMOD. Helmut Lang was at that time a student intern based at ICIMOD.

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International Centre for Integrated Mountain Development
Kathmandu, Nepal

FOREWORD

The discussion paper presented here by Dr. Robert J. Fisher and colleagues, entitled "The Management of Forest Resources in Sindhu Palchok and Kabhre Palanchok Districts in Nepal", constitutes one of six case studies initiated by ICIMOD in conjunction with the Programme on Organisation and Management of Rural Development.

This programme focused primarily on the organisational resources and their relationship to the management of natural resources for sustainable development and increased productivity in mountainous areas. Across the Hindu Kush-Himalayan Mountains, rural development projects are relying on different strategies for the achievement of the above goal. These strategies are being implemented within a given macro-institutional and legal framework; presumably with adequate attention given to the sociocultural context. The framework and the context limit, as well as offer, possibilities to development agencies. The purpose of the case studies was to examine innovative institutional strategies implemented in projects (carried out by governmental agencies or nongovernmental organisations) and also to analyse and assess the utility and effectiveness of indigenous resource management systems.

I would like to thank the Aga Khan Foundation for the partial financial support in running the programme. I am also grateful for the assistance we received from the Nepal-Australia Forestry Project, the Dhading District Development Project, the Aga Khan Rural Support Programme and the Pak-German Self Help Project. The programme execution from ICIMOD's side was carried out by Dr. Anis Dani (now with AKRSP) and Dr. Deepak Bajracharya.

ICIMOD was also fortunate to have engaged in collaboration with professionals from various national institutions and project implementing agencies in China, Nepal, and Pakistan. Mutual consultations were held at various planning workshops and orientation sessions in Kathmandu and at the project sites. The participating researchers eventually agreed on the methodological framework and the set of questions that they would try to address. Sufficient flexibility was left, so that, at the discretion of researchers, responses could be made to site-specific situations.

Research Methods. A combination of techniques was used during the course of the research that lasted between six months to one year.

- Collation and analysis of existing data from government and project records.
- Selected open-ended interviews with relevant government officials, project personnel, and key resource persons from the region.
- Field investigations in 8-12 villages within each project area, selected purposively to cover the various strata, the variable impact of development activities, and a range of resource management activities; rapid appraisal techniques were developed and each village was visited two or three times, altogether for about 7 days, to obtain details of specific components after preparation of an initial village profile.
- Participant observation of project activities.

The **key questions** that the researchers were trying to address included the following:

- Under what circumstances do existing resource management systems undergo institutional innovations?

- What elements of existing resource management systems can intervening agencies build on: tenurial arrangements? property relationships? organizational structures? functionaries?

- How do different kinds of interventions compare in terms of their ability to generate sustainable development and sound environmental management?

- How does the user group internalize the benefits and costs of using the resource? How are risks shared ? If benefits are not equally distributed, how are the losers compensated ?

- How does the user group ration a scarce resource?

- How does the user group respond to development opportunities and entrepreneurial endeavours?

Influencing Factors. In addition, the following set of questions, which emerged from the reviews and research already conducted by ICIMOD, were also proposed for investigation during the course of the study:

- Is the propensity of user investment in future returns related to the resource value, i.e., to the perceived value of the resource?

- Does the tenurial security of the resource to the user influence the time horizon of local resource management?

- If actual users have more responsibility for management decisions over their resources, are the resources more likely to be managed for long-term productivity at less cost to the supporting agencies?

- Does increased equity in distribution of resource benefits encourage greater participation by user groups?

- Will a resource management function be performed more efficiently if the performer is accountable to the local user group?

Women's Role in Resource Management. A third set of key questions, which appear to be of critical importance, deals with the role of women in resource management. These are:

- What role do women have in resource management?

- Is the role of women of particular importance in the use of certain resources, e.g., forests, grasslands, and water ? If so, do they have any role in decision-making about, and the management of, those resources ?

- What are the constraints on women's involvement in resource management?

The present study addresses many, but not all, of the preceding issues, with a particular focus on forest resources in Sindhu Palchok and Kabhre Palanchok districts of Nepal. It examines the features of indigenous forest management systems and draws upon this analysis to assess the effectiveness of externally-sponsored local organisations in the context of the Nepal-Australia Forestry Project. The authors argue that outside agencies should make sure that local organisations are given adequate attention and that existing use-rights are taken into account in order to set up effective forest management systems. I am confident that the readers will find these observations interesting and thought provoking.

Readers might be interested in knowing that all the six case studies mentioned above, including the one presented here, are brought out in the Discussion Paper Series of the Mountain Population and Employment Division (i.e., MPE Series No. 6 through 11). We would be happy if you would write to us with your comments and suggestions and join in the discussion on these important issues. ICIMOD is organising an International Workshop on the Role of Institutions in Mountain Resource Management, 1-4 May 1990, in Quetta, Baluchistan, Pakistan, to discuss many of the issues brought out by the case studies and provide a forum for interaction among researchers, development practitioners, and policy makers. The results of the Workshop are forthcoming shortly after the event takes place. ICIMOD is hopeful that these efforts would be useful in generating dialogues on organisational and institutional isssues of integrated mountain development.

E.F. Tacke
Director

PREFACE

The case study which is the subject of this report was jointly funded by ICIMOD and the Nepal-Australia Forestry Project (NAFP) and is one of a series of case studies undertaken as part of ICIMOD's program "The Organization and Management of Rural Development" (OMRD).

Since 1977, NAFP has operated in Sindhu Palchok and Kabhre Palanchok districts to assist the Department of Forest to increase the forest resource and to develop silvicultural systems and forest management styles consistent with local wishes and HMG policies and legislation. Beginning on a very small scale and subsequently enlarging at a pace set primarily by that of local cooperation, the Project had, by the end of 1988, established about 11,000 ha of new forests.

The main current thrust of the Project relates to forest management in a broad sense. If management is to be successful and to meet the intentions of His Majesty's Government's Decentralization Act, the forests must be managed by user groups and be so treated and utilised as to best meet the perceived needs of the users. This is clearly no easy task. It might best be achieved if new management structures accorded as closely as possible with existing unofficial but indigenous forms of control. The project has, therefore, embarked on a series of studies relating to both indigenous management systems and those developed by the Department of Forest and NAFP at various times. It is anticipated that these will provide evidence as to their various strengths and weaknesses and so be a valuable guide for future action. The cases reported here form part of this continuing Project activity. We are indebted to ICIMOD for initiating the OMRD program and for asking NAFP to be a part of it.

D.M. Griffin
Project Director
NAFP.

ACKNOWLEDGMENTS

Many of the ideas presented in this paper developed in the context of much debate and discussion with colleagues at NAFP and at the District Forest Offices of Sindhu Palchok and Kabhre Palanchok. Without their ideas and practical assistance the field study could never have taken place and this report could not have been written.

In particular I would like to thank Dr Don Gilmour, Team Leader of NAFP. He has contributed profoundly to the generation and development of ideas and has supported the study from the beginning.

I would also like to thank Dr Anis Dani of ICIMOD for his contribution. He has coordinated the entire OMRD program from the beginning and provided the conceptual and analytical framework for it. He contributed specifically to this case study through many discussions and with incisive editorial comments.

R.J. Fisher
Principal Investigator

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ABSTRACT

This case study examines the features of indigenous systems of forest management in Sindhu Palchok and Kabhre Palanchok Districts and draws upon this analysis to examine externally-sponsored local organisations.

- The essential feature of indigenous systems is the presence of institutionalised norms based on a degree of consensus among users. Formal organisations, where they exist, are a superstructure (sometimes inessential) built on to this essential substratum. The absence of a formal organisational structure does not mean that no local system exists; nor does the disappearance of the organisational superstructure constitute the disappearance of the system.

- Committees are often not the locus of decision-making in indigenous systems and it is a mistake to assume that the presence or absence of a committee equates to the presence or absence of an effective local institution or organisation.

- In externally-sponsored systems formal organisations often exist without institutionalsied norms or roles and, consequently these organisations often do not function effectively.

- Failure to take adequate note of existing use-rights or to make sure that there is an adequate institutional basis for local organisations is a major limitation of attempts by outside agencies to set up effective forest management systems.

1

INTRODUCTION

In 1957 the Government of Nepal nationalised forest resources. However, this policy did not prove to be an effective means of managing forests. Since 1978, with the introduction of the **Panchayat Forest Rules** and the **Panchayat-Protected Forest Rules** , there has been a move towards a new policy that a substantial proportion of forests in the Middle Hills should be handed over to local communities. There are three major reasons for the emphasis on community control of forests. The first is essentially philosophical: the Government is committed to an overall policy of development through decentralization and people's participation. The second is pragmatic: it is recognised that the Department of Forest does not have the staff or capacity to manage forest resources effectively. Thirdly, it is recognised that forest resources, whether government, communal or private, are an intrinsic part of farming systems: whatever the legal tenure they must be used, and are used, by the people living in the hills.

Despite the clear intention at the level of policy, the rate of handover has been slow. Further, if the effectiveness and the rate of adherence by local users of forests to agreements about forest management are useful indicators, insufficient attention has been paid to the institutional and organisational basis for local management. The main purpose of this report is to examine the institutional basis for effective local management of forest resources.

Since 1986, the Nepal-Australia Forestry Project (NAFP) has been working towards a methodology for developing sustainable management systems under the control of local communities. The problem faced by NAFP and the other agencies involved in community forestry was knowing what forms sustainable management might take. Early attempts to make management agreements with communities showed that externally sponsored local committees were usually unable to carry out the role effectively. (For a discussion of early attempts see King et al. 1987 and Paudyal et al. 1987).

It had become clear from accounts appearing in the literature, and from the field observations of project staff and associates, that local communities were frequently organising and managing forests on their own initiative without any outside intervention. However, very little was understood about the way these local systems operate. There was a belief within the project that understanding indigenous systems of forest management would be of great practical value in developing viable new local management systems where these were needed.

NAFP agreed to involvement in one of the case studies in ICIMOD'S program on The Organization and Management of Rural Development (OMRD) for two reasons:

1. It provided an opportunity to explore the organisational basis of effective existing local systems of forest management.

2. It provided an opportunity to ascertain why project activities in forest development worked in some cases and not in others.

Later, it emerged that the case study provided an opportunity to test techniques for gathering the socioeconomic information needed for negotiating agreements with communities over management.

Background on the Nepal-Australia Forestry Project

The Nepal-Australia Forestry Project is a bilateral aid project funded jointly by the Governments of Nepal and Australia.[1] NAFP began operating in Nepal on an informal basis in 1966. In 1978 a second phase commenced, this time specifically located in two districts (Sindhu Palchok and Kabhre Palanchok) situated immediately to the East and North East of Kathmandu valley. (See Map 1). A third phase commenced in 1986 and is due for completion in 1990. Since the second phase began, the role of the project has been to assist the operations of the Department of Forest in all aspects of forest work in the two Districts.

During the second phase, the project developed a comprehensive afforestation program, based on a network of nurseries, building on a community approach to forestry developed largely by T.B.S. Mahat, then the Divisional Forest Officer[2] responsible for the two districts. (This approach is discussed more fully in Chapter Three.)

In the third phase of NAFP, emphasis shifted from plantation establishment and protection to forest management, including the management of existing natural forests. This new activity continued in parallel with a reforestation program.

Profile of the Project Area

The project area (Map 1) runs from the Himalayan Range in the North to the Mahabharat Lekh in the South. Between these two high areas, the central part of the project area consists of terrain typical of the Middle Hills. Sindhu Palchok District is divided into three watersheds by rivers running from North to South with high ridges in between.

Both Districts are relatively accessible from Kathmandu. A major road from Kathmandu runs through Kabhre District before turning North through Sindhu Palchok to the Tibetan border. Some feeder roads run off this main road. The lower reaches of each of the three major rivers in Sindhu Palchok can be reached by road and, apart from long periods when they are closed by landslides, there is sometimes vehicle access for considerable distance up the Balephi and Sun Kosi Rivers.

Apart from high country close to the Tibetan Border and in the area to the South of Kabhre Palanchok District, there are few parts of the project area beyond a day and a half's walk from a road. This high level of accessibility (compared to most of the Hills of Nepal) facilitates Project activities and means that most people in the area have some access to major markets, both for sale of surplus produce or locally manufactured goods (such as carpets or *thangkas*[3]

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1. In earlier phases the project was managed for the Australian Government by the Department of Forestry at the Australian National University. From 1985 the managing agent has been Anutech P/L, a commercial consultancy arm of the Australian National University. A close connection has been maintained with the Department of Forestry

2. Prior to 1983, both Sindhu Palchok and Kabhre Palanchok comprised a single Forest Division under a Divisional Forest Officer (DFO). In 1983, the division was split and each district fell under the responsibility of a District Forest Controller (DFC). In late 1988 the District Forest Controllers (DFC) became District Forest Officers (DFO). DFO is used throughout this report.

3. *Thangkas* are Buddhist hand paintings that depict symbolically the important precepts of the Faith.

and for purchase of goods from the capital or from local market centres. The road from Kathmandu to Tibet is the focus of much economic activity. Small bazaar towns, strung along the road, sell imported goods and provide tea, meals, drinks and accommodation to traders and tourists. These bazaar towns provide market products to villages in the hinterland and, in turn, are centres for the purchase of agricultural products, firewood and other products. They also provide opportunities for wage labour through portering, building work and so on.

Proximity to the urban centres of the Kathmandu valley provides economic opportunities much greater than those available in more remote hill districts. For example, milk depots for collection of milk for urban consumption are located at several points in both Districts.

The market influence is, thus, a very important factor. Nevertheless, most people in the hills remain very heavily dependent on agricultural and livestock production for subsistence. In some areas, particularly along the main road, agriculture is market oriented, involving inputs of chemical fertiliser and improved seed varieties. Elsewhere there are local food deficits.

Livestock production is often an adjunct to agriculture. However, in the northern part of Sindhu Palchok in some villages adjoining high ridges, transhumant pastoralism is important.

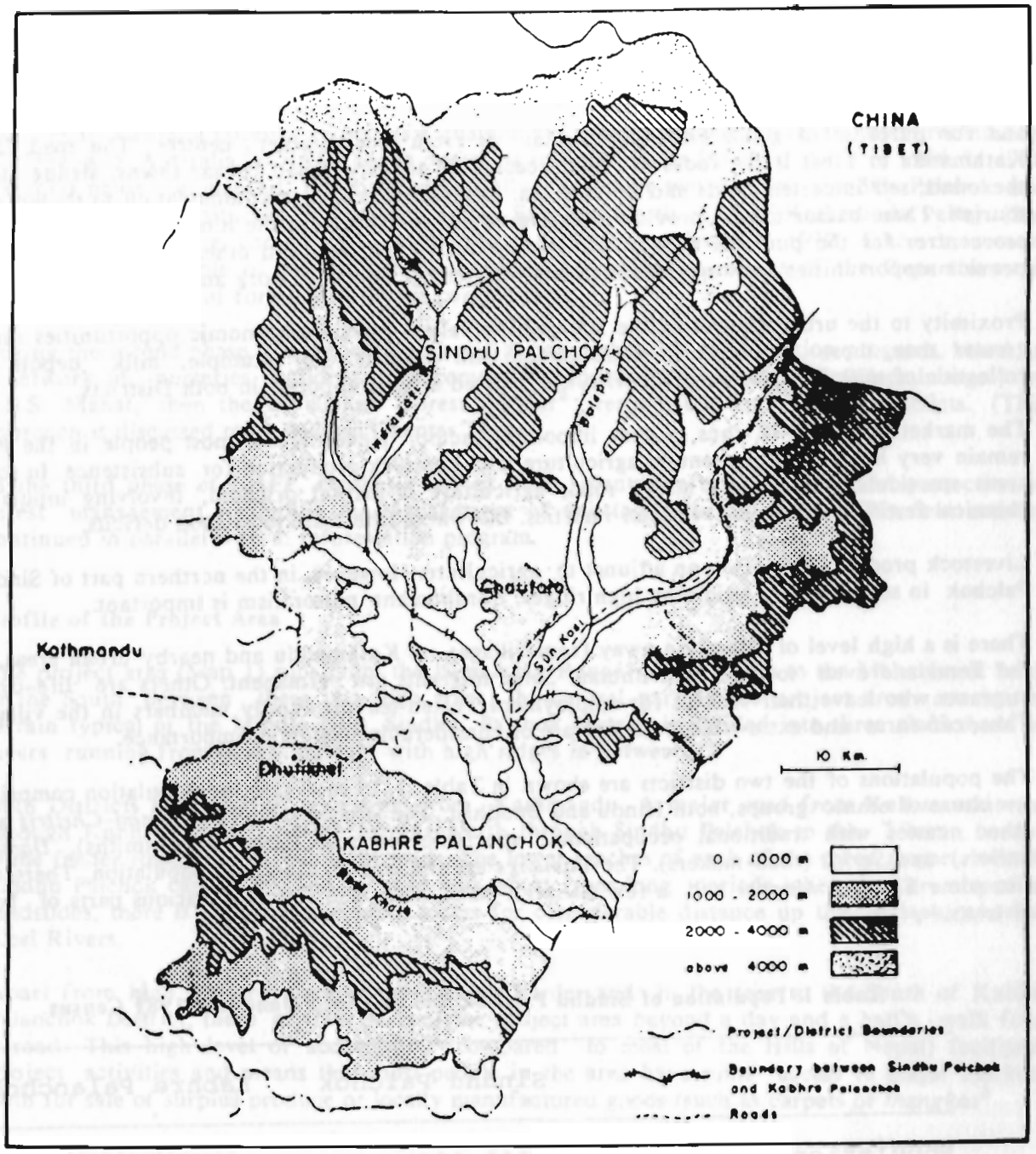
There is a high level of migration away from villages to Kathmandu and nearby urban areas, to the Terai and even to India and Bhutan. Some migrants are permanent. Others are life-cycle migrants who leave their villages for employment, often leaving family members in the village. Thus, off-farm and extra-village income are of considerable economic importance.

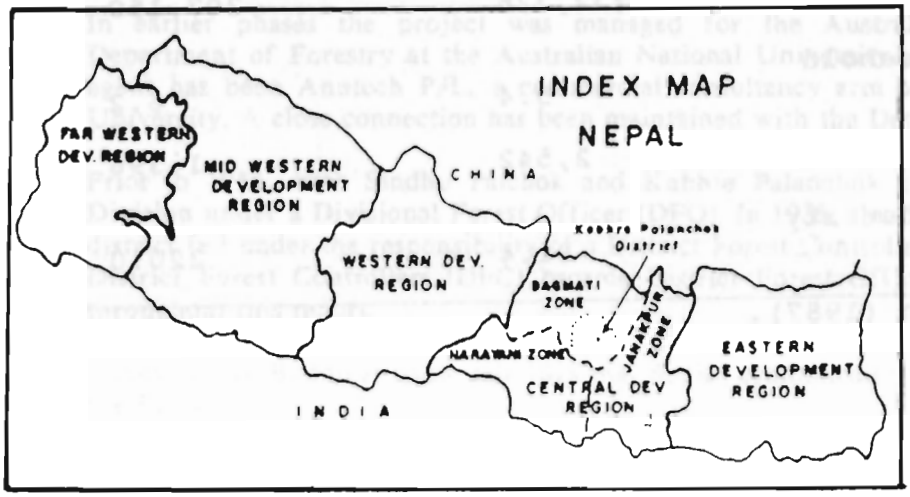
The populations of the two districts are shown in Table 1. In each case the population comprises a mixture of ethnic groups, both Hindu and Buddhist. The Hindus include *Brahman-Chettris* and other castes with traditional occupational specialties such as *Kamis* (blacksmiths), *Damais* (tailors) and *Sarkis* (shoe-makers). The *Tamangs* are the largest Buddhist population. There are also some *Sherpas*, *Magars* and a few *Gurungs*. *Newars* are also found in various parts of both districts.

Table 1. **Population of Sindhu Palchok and Kabhre Palanchok, 1981 Census.**

	Sindhu Palchok	Kabhre Palanchok
Population	232,326	307,150
Average Household size	5.4	6.2
Area (km^2)	2,542	1,396
Population density (No/km^2)	91.4	220.0

Source: Anon (1987).





MAP I

NAFP PROJECT

AREA

Various ethnic groups often live in separate hamlets, but where this occurs, these are adjacent to hamlets occupied by other ethnic groups. In areas where there are intermingled castes, the Buddhist groups are effectively treated as a caste within the Hindu caste system. Interactions with people from Hindu castes are regulated accordingly. *Tamangs* are numerically and politically dominant in some areas, such as Northern and Eastern Sindhu Palchok, although, even in these areas, there are scattered hamlets of other groups.

The heterogeneous ethnic composition in most areas has implications for resource management. The potential for the management of common property forest resources, through caste-based or lineage-based institutions, is limited by the geographic dispersal of castes and lineages and the existence of heterogeneous "communities" around resources. Thus, the principal indigenous social structures (castes and lineages) are not necessarily a viable basis for organising forest access and management.

It is important to emphasise here that the two districts are, in some respects, atypical of Nepal's hill districts. Because of proximity to Kathmandu and the consequent demand for forest products, deforestation has been worse than in some other areas, although, according to Mahat et al. (1986b) *"the history of the forests is probably similar to those of much of eastern and central Nepal."* Further, proximity to Kathmandu may have lead to a relatively high degree of incorporation into the nation state. For these reasons this report makes no claims that the indigenous forest management systems described will necessarily be typical of systems elsewhere in the hills of Nepal, although it is expected that many features will be present elsewhere and that much of the analysis will be broadly relevant.

Different Forms of Forest Tenure

Legally, there are several types of forest tenure in Nepal. The most common type is government forest, which is legally under the control of the Department of Forest. The second and third categories are Panchayat Forest (PF) and Panchayat Protected Forest (PPF).[4] Under the appropriate legislation, the Department of Forest is empowered to hand over forest areas to the *Gaun* Panchayats[5] Transfer of tenure to the Panchayat as PF or PPF does not, in itself, authorise the Panchayat to carry out harvesting of green forest products. In order to do so there must be an approved management plan, which is, in effect, and agreement between forest users and the Department of Forest as to how the forest should be used. It is increasingly recognised that the Panchayat is not the appropriate unit for day to day management of forests and that management should be done by "user groups", but tenure is vested in the Panchayat.

The fourth type of tenure is private forest. Under the legislation small patches of forest may be held privately. The fifth type is leased forest. Under the **Leasehold Forest Rules** (1978), individuals or groups can lease government forest for use in forest production. Although the

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4. For the purposes of this report the distinction between PF and PPF is not significant. Very simply it relates to whether the land is handed over to be afforested (PF) or whether it is handed over already forested (PPF), although there are some overlaps. (See Arnold and Campbell, 1986, for more details.)

5. The *Gaun* Panchayat (village council) is a politico-administrative unit. Despite the name it does not consist of a single village, but rather of nine wards which may each contain a single large village or a number of smaller hamlets. The Panchayat is represented and administered by an elected village Panchayat assembly headed by a *Pradhan Pancha* and a deputy *(Upa-Pradhan Pancha)*

legislation has existed for several years, it has not yet been implemented on any significant scale anywhere in the hills. In addition to these basic forms of tenure there are religious forests. These are discussed in Chapter 2.

In parallel with the system of legal tenure there is a local system of claims to use-rights and recognition of other's use-rights which is perhaps best described as extra-legal. It, in effect, constitutes a parallel indigenous system of tenure.

During this report frequent references will be made to tenure of forest land. Unless otherwise specified all references to tenure relate to locally perceived tenure rather than to tenure according to the laws of Nepal. For example a forest may be described as a private forest because that is how it is perceived by villagers, whereas it may technically be government land.

2

INDIGENOUS FOREST AND PASTURE MANAGEMENT SYSTEMS

Introduction

This chapter focuses on the indigenous forest management systems examined in the case study. It also deals with some aspects of pasture management systems, because these throw some light on forest management. There is a very close relationship between forests and pastures in the project area. Frequently pastures are degraded forests. Also frequently, limits are placed on the effectiveness of externally-sponsored systems of forest management by the fact that land which is legally classified as forest is locally used as grazing land.

From the outset it is necessary to explain the use of a number of terms. The term **forest management system** is used in this report to refer to **a set of forest management practices (including protection, utilisation and distribution of products) and the institutional or organisational arrangements by which they are carried out.** In other words both technical and social aspects of forest management are treated as part of a single system. This differs from the common usage of forest scientists who tend to talk about technical arrangements for forest management as forest management systems.

The term "indigenous" is used in preference to "traditional" because "traditional" implies continuity. An indigenous system may be a new development. The crucial difference is between systems which are largely the result of local initiatives and those which are set up by outside agencies (Government or project). The latter are called externally-sponsored systems. In fact, there is not a simple dichotomy between indigenous systems on one hand and externally-sponsored systems on the other. Indigenous systems exist in the context of a wide variety of outside influences and in the context of a powerful nation state. There is a continuum between indigenous systems and externally-sponsored systems. The indigenous extreme is the case of a system which is a local initiative and which continues without external recognition. At the extreme externally-sponsored end of the spectrum are systems which are unilaterally imposed by outside agencies. In between there are interim types including indigenous systems which are recognised but ignored, those which are supported and those which are legally recognised. Thus, depending on the **degree** of external support, given local systems may fit along a continuum from fully indigenous at one end to fully externally-sponsored (imposed) at the other.

Forest Management in the Rana Period

In addition to a classification in terms of indigenousness/external sponsorship, it is possible to classify local systems in terms of time. Some systems are contemporary and others are not. Using these two dichotomies as a basis for classification there are potentially four categories of forest management systems (see Table 2). For practical purposes this report concentrates on contemporary systems (Types A1 and A2) which came into existence in Nepal after the end of the Rana period (1950). It is concerned with earlier systems only in terms of identifying continuities between them and contemporary ones. As far as earlier systems are concerned we have little information on indigenous systems, although we have some information about local forest control through the *Talukdari* System.

Table 2: **Types of Forest Management**

	1 Indigenous	2 Externally sponsored
A. Contemporary	A1	A2
B. Early Systems (i.e., pre-1950)	B1	B2

The *Talukdari* System is often described as "indigenous" (Gautam 1987). However, the system of forest control through these local functionaries during the late Rana Period was, we would argue, a form of externally-sponsored forest management. It represented, locally, the presence of the State and was not, therefore, an indigenous system at all.

Briefly, the *Talukdari* System operated as part of the state revenue administration (Regmi 1978; Mahat 1985). In the hill areas, *Talukdars* were tax collectors, each usually responsible for a number of villages, although a single large village might be divided among several *Talukdars* (Regmi 1978). Among their responsibilities was control of land resources, including forest land. There are a number of other terms for local functionaries, including *Mukhiya* and *Mijar* Regmi points out that *Talukdar* is a generic term covering a number of different local functionaries. Thus the category *Talukdar* included *Mukhiyas* and *Mijars*. The two terms referred to local headmen (the *Mijar* in some Buddhist groups, including the Tamangs and the *Mukhiya* in other contexts). It is quite possible that the original roles of *Mukhiya* and *Mijar* were indigenous ones. The *Talukdari* system recognised and incorporated these roles.

In reference to forests the main task of *Talukdars* was to ensure that fees were collected for all trees cut down. In this role they were often assisted by guards (known by various names including *Chitadar*) who protected particular patches of forest. These guards were appointed by the *Talukdars*. The *Talukdars* answered to the *Bada Hakim*, who was the administrative head of one of thirty-three regions (*Goswara* under the Ranas. They were apparently not paid directly by the administration, but received a commission on revenue collected. The position was hereditary.

Thus, while *Mukhiyas* and *Mijars* were indigenous roles, their official role (as *Talukdar*) was externally sponsored. As local villagers (often influential ones) the *Mukhiyas* and *Chitadars* may have had genuine local support in some cases, but they were the local appointees of the state.

The *Talukdar-Chitadar* arrangement was not, in any useful sense, "indigenous". The arrangement was primarily concerned with extracting taxes, not with protecting or managing forests efficiently. Mahat (1985) and Mahat et al. (1986a) suggests that the process of deforestation in the hills of Nepal is not a recent phenomenon. He argues that a major cause of deforestation was state policy which encouraged the creation of new agricultural land from forests. The main reason for this policy was to increase land tax collection and agricultural production. Thus, generally, the Rana Administration worked, in effect, **against** sustainable forest management, not for it.

There were, of course, exceptions to this. Mahat provides a translation of orders, issued in 1874 by Prime Minister Jung Bahadur Rana, which show considerable concern for conservation of forest resources in Anaikot in present-day Kabhre Palanchok District (Mahat 1985, Appendix 1; Mahat et al. 1986b). This document is a relatively conservative forest management plan allowing both protection and limited utilisation. However, Mahat's general conclusions, and oral evidence from this study, suggest that sustainable forest management was neither a major concern nor an achievement of the Rana Administration.[1] Nevertheless, the practice of collecting fees for forest use presumably had the effect of reducing pressure on forests, at least to some extent.

Types and Spread of Indigenous Forest Management Systems

This section will set out some of the major features of indigenous forest management systems. Descriptions of specific systems are contained in Annex 2 and are identified by case numbers.

How Common are Indigenous Systems?

A major finding of the present research is that indigenous forest management systems are much more common than expected at the commencement of the study. The research team, along with project staff at that time, recognised that indigenous systems existed, but felt that they were rather uncommon. This perception has changed dramatically. Not only has fieldwork revealed a number of relatively viable systems, but greater consciousness of their possible existence has led to the identification of many others by the project.

No quantitative data exist as to the overall number of indigenous systems in the two districts. Given their informality and their generally limited size this is not surprising. It is true to say that they have been identified, in one form or another, throughout the project area since project and departmental staff have begun asking appropriate questions.

The fieldwork for this study focused on settlements, not panchayats. Nevertheless, in examining each settlement the panchayat within which it was situated was examined for context. Table 3 sets out the number of indigenous forest management systems (pasture management systems are excluded) in each of the focus settlements and elsewhere in the panchayats in which they are located. It is important to recognise that selection of settlements and panchayats was purposive, not random. Some settlements were specifically selected because they are areas where forest development activity had been noticeably unsuccessful, while others were selected because forest management systems were known to exist there.

A panchayat-level study carried out by an NAFP officer (Jackson 1987) also provides evidence of the extent to which indigenous systems occur. The study involved an informal examination of all forest resources in a particular panchayat. It identified a variety of systems for a large number of forest patches within the panchayat. The study is summarised in Table 4.

In general, indigenous forest management systems are found in many patches of reasonably healthy natural forest throughout the project area. This is hardly surprising, since there is a

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1. Regmi (pers. comm.) has suggested an alternative view. He argues that the Ranas issued many edicts concerned with forest conservation. Some of these are published in the Regmi Research Series. See, for example, Regmi Research Series, 1981, p 83.

Table 3: **Indigenous (Non-Private) Forest Management Systems Identified within Studied Panchayats**

Panchayat	No. of Indigenous Systems[a]	
	Focus Settlement	Elsewhere in Panchayat
Badase	1	2
Chaubas	-	-
Chillaune	-	2
Mahadebtar	2	1
Majhihead	1	2
Rabi Opi	1	-
Syaule	-	2
Thulo Siru Bari	-	1

Note:

a. Includes *guthi* forests. *Guthi* is a broad term referring particularly to community group or organisation, formed on a religious or clan basis, which jointly owns religious lands/forests and meets on a regular basis for ritual meals. The *guthi* members also have reciprocal obligations during principal life-passage ceremonies - birth, death etc.

causal relationship between the presence of management systems and the existence of healthy forests. The absence of such systems tends to result in forest land degrading into shrubland or pasture. However, while indigenous systems are common in natural forests, they are not evident in very large contiguous forest patches such as high altitude forest areas.

Systems observed in the project area range from structured social organisations based on committees to relatively simple institutional arrangements.[2] Each of these broad types will be dealt with in turn.

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2. For the purposes of this study (as with other studies in the OMRD program) the word **institution** refers to any behaviour which is acceptable and which becomes a socially accepted norm for a specific social group. **Organisation** refers to a social group which has a structure. Rules of forest management may be institutionalised without there being any formal structure.

Table 4: Indigenous Forest Management Systems

Forest Name	Type	Nature
Nangikharka	Plantation	
Pashupati Guthi	Plantation	Guthi land for temple in Kathmandu (non-indigenous)
Chotidaanda	Plantation/ natural	Grass cutting permitted by Panchayat level forest committee
Ramche Chiandaanda	Plantation	
Chiandaanda	-	
Tharkechiandaanda	-	
Gordaanda	-	
Charpatisamundre	Mixed Plantation	
Samundre diopokhari	Plantation	
Chiandaanda	Plantation	Area planted by local people on a Tamang burial site.
Hitti	Natural	Religious forest
Kabhredaanda	Plantation	Open for grass-cutting for 10 families
Nattipani	Natural	Locally protected. Wood products only used for religious ceremony
Pandera	Natural	Locally Protected.
Bhupali		Locally protected. Used only for collection of funeral firewood
Thulakhop	Natural	
Daraune Pokhari	Natural	Religious Forest

Source: Jackson 1987

Formal Organisations

Structured systems typically consist of a defined user group represented by a committee. The committees are regarded as having authority to make decisions about forest use, disputes and so on. In the indigenous systems observed there was little evidence of committees meeting regularly. More commonly, committees meet on an ad hoc basis, when there is a particular need. Although committee-based organisations are at the most formal end of the continuum of types of forest management systems, there is a considerable degree of variation in the formality with which various committees operate. Some keep minute books noting decisions (e.g. Case 1, Nala-ko-Thulo-Ban), others keep no records.

In fact the very use of the word "committee" presents some problems. In Nepali *samiti* is used for "committee". The difficultly is that *samiti* is interpreted by administrators and development agents (including foresters) as an exact equivalent of the English word "committee". Thus, for outsiders, it has connotations which suggest a group which is an elected or appointed sub-group of the user group (or population) and which has some sort of delegated authority to make decisions on behalf of the group. For villagers, *samiti* usually does not have these connotations. Village leaders and a few others with a more sophisticated knowledge of bureaucratic activities may follow this interpretation, but most others use *samiti* as a synonym for *sabha*, which refers to **ad hoc assemblies** of all interested parties, or as many as are able to attend.

This ambiguity in the meaning of *samiti* leads outsiders to be frustrated when very large committees are formed or when new committees are appointed at every meeting. It also contributes to an unrealistic assumption that the decisions of externally-sponsored committees should be adhered to. The problem in such cases is that the committee may have no mandate to make decisions, either from the members' point of view, or from the point of view of other villagers. The committee as a sub-group with delegated decision-making authority does occur in indigenous forest management, but it is relatively rare.

A common feature of formal systems is the existence of forest watchers usually paid by a collection of grain from each user household. Such a collection for payment in kind is called a *manapathi* system. Occasionally, payment is made in cash, but this is not common in indigenous systems. In the case of an indigenous system operating in Nala-ko-Thulo- Ban (Case 1) cash payments are reportedly made only when people cannot pay in grain. Thus cash is paid in lieu of kind, not kind in lieu of cash. The presence of forest watchers paid on the *manapathi* system is usually, but not invariably, associated with the existence of a committee.

At this stage very little is known about the effectiveness of forest watchers (Fisher, 1987). It is not known whether the presence of a forest watcher is itself important or whether the fact that payment to the forest watcher simply gives users a proprietory interest in the forest which is translated into self-disciplined protection. Given that even the most conscientious forest watcher is unable to watch over a forest all the time, the presence of a forest watcher during duty hours cannot be an adequate protective measure in itself.

In Ganeshthan and Maina Bisauni forests of Badase Panchayat (Case 2), there are two patches of natural forest which were until recently protected through a *manapathi* system that employed two forest watchers. The system broke down for a number of reasons. One of these was the fact that another forest watcher was employed for a nearby forest with project funds. Informants reported that they were no longer as careful about using the forest as they had been. In order to reinstate local protection, efforts were being made to reappoint a local forest watcher. The man was old and acknowledged to be not very conscientious. This, however, was not regarded as a major constraint. It appears that the sense of ownership and responsibility involved in paying for a watcher is most important for protection.

Informal Institutional Arrangements

Informal institutional arrangements for local forest management often exist in the absence of any formal organisation. Institutionalised norms and values are essentially a pre-requisite for any functioning system.

The *manapathi* system of paying a forest watcher in Ganeshthan and Maina Bisauni (Case 2) effectively collapsed in 1986. Efforts to revive it were made in 1987. A new committee was set up and a new collection was proposed. Little progress had been made by the time of the second visit by the research team in November 1987.

Nevertheless, there remains a strong consensus that the forests should be protected and used sensibly. Despite some illicit cutting and pruning, sometimes fairly openly admitted, the rules of forest use remain in the form of strongly held norms of behaviour. The system shifted from a structured organisation to an informal institutional arrangement.

Elsewhere in Badase Panchayat two other indigenous systems operate largely on the basis of consensus among users (Banechaap and Harre ko Ban - Cases 4 and 5). Sanctions are, however, applied to those who break the locally agreed rules.

The combination of a shared perception of the problem and a mutually acceptable response, represents a necessary condition for indigenous forest management. Even if no organisational structure grows out of the agreed norms of behaviour, effective protection and controlled utilisation may result. In many cases (Nala-ko-Thulo-Ban, Ganeshthan/ Maina Bisauni and Mahankal Ban - Cases 1, 2 and 3) institutional arrangements have continued to operate in situations where formal organisations have changed, disappeared or gone through periods in which they have ceased to function. It appears that institutionalised norms, based on a degree of consensus among users, are the essence of all indigenous forest management systems. Formal organisations, where they exist, are a superstructure (sometimes inessential) built on to this essential substratum. The absence of a formal organisational structure does not mean that no local system exists; nor does the disappearance of the organisational superstructure constitute the disappearance of the system.

Religious Forests

An important group of indigenous forest management systems pertain to religious forests (*dharmik ban*). The **Forest Act**, 1961, mentions a legal category of religious forests associated with religious sites. Religious forests under that Act are, however, not a separate form of tenure as the forest remains government forest. These are, at this stage, no rules or regulations for religious forest under the Act. There are some forests which, as *guthi*[3] land are provided to a temple or religious sect. In addition to these two legally recognised types of religious forests, these are many other patches of land which are locally regarded as *dharmik ban*. These can exist on land which is technically government land, on private land or in forests which have been formally handed over as Panchayat Forest or Panchayat Protected Forest.

Religious forests sometimes have a formal organisational structure, but those covered in the study do not. The two religious forests in Mahadebtar (Padhyeroko Ban and Jogeswor Mahadeb Mandir Forest - Cases 6 and 7) both operate without a permanent committee. Where decisions are made this occurs at meetings (*sabhas*) called for a specific purpose.

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3. See "note" in Table 3 for definition of *guthi*. Proceeds from the *guthi* land, including taxes collected from farmers, are for the support of religious and social activities.

It should be noted that few religious forests were covered in this study and there are significant gaps in the understanding of the nature of institutional and organisational arrangements for their management. In particular, the role of *pujari* (ritual specialist) in forest management has not been explored.

Features of Indigenous Forest Management Systems

Consensus and Sanctions

We have already pointed out that one of the most important features of functioning indigenous systems is the presence of consensus. In virtually all of the systems identified in the study there was a significant element of agreement among the users about the need for controlling access to common forest resources and about the rights and restrictions which applied to forest use.

This is not to say that there were no conflicts. The fact that rules and practices include sanctions for breach of norms demonstrates that an underlying consensus is not always a sufficient basis for controlled access to forests. Further, there were accounts of conflicts in some of the systems examined. However, a reasonable level of consensus (or at least consent) was a minimum condition for a functioning system. In the absence of a reasonable level of consensus, systems often broke down whether there were sanctions or not.

There is a tendency for different sanctions to apply to people within the user group and people from outside. Case 5 describes a situation in which the sanction for major breaches by users was being reported to the Forest Department. Where outsiders (or those with reduced secondary rights) broke the rules the sanction was seizure of the forest products taken. In other words the rights of the in- group (those who claimed use-rights) were defended by an ultimate resort to violence when these rights were challenged by outsiders.

In some cases (e.g. Maina Bisauni and Ganeshtan forests - Case 2) confiscation of equipment and violence were described as the sanctions against outsiders, but were reportedly never invoked against users because they never break the rules. In fact, what seems to happen is that breaches of rules by users are tolerated within limits. This is partly because minor breaches by those with use-rights are not a serious challenge to the legitimacy of claims. It is probably also related to the fact that application of sanctions within the user group may lead to conflicts which can split the group. In fact, major disputes within a group tend to lead to the breakdown of a system. This happened in the case of Maina Bisauni and Ganeshthan. Thus, **within a user group consensus is far more important than sanctions.**

Consensus about what should and should not be done essentially comprises an institutional arrangement. Institutional arrangements can, by themselves, lead to effective management. Sometimes, however, they are also accompanied by an organisation. Theoretically it is possible to have an organisation which is not institutionalised (Uphoff 1986), but such non-institutionalised forest management organisations tend not to work, simply because no one takes any notice of the rules and practices. **Non-institutionalised organisations are very common amongst sponsored systems (for example, as imposed committees). They do not persist in the case of indigenous systems of forest management.**

User Group Membership

The term "user group" is sometimes used rather loosely as a synonym for users. In this report "user group" refers to a bounded group with specific membership. A user group consists of all people whose claims to use rights are mutually acknowledged. "Users" is simply a descriptive

category describing anyone who uses a particular forest. Those who take products from an open access resource are users. Those who have specific rights to a specific common property resource are members of a user group. A user group exists in relation to a specified resource. People can be members of a number of user groups (each for different resources).

Thus, the crucial issue in defining membership of a user group is the presence of mutually recognised rights. User groups examined in the case study had a number of characteristics:

1. Size: Usually the user group was rather small, typically consisting of thirty to fifty households. The largest known user group in the project area is the user group for Nala-ko-Thulo-Ban (Case 1). For this forest the user group consists of people from ten wards in two panchayats. The exact number has not been ascertained but, working on an average of about fifty households per ward, the potential user group may consist of as many as 500 households. It is, however, very doubtful that all of them actually take products from this forest alone.

   The advantages of small user groups are fairly obvious. They are less likely to be faced with major factions and conflicts and regular face-to-face contact helps to solve problems informally.

2. Basis of Membership: In the project area the principle of recruitment to user groups is usually residence. This is determined in terms of village of residence rather than ward of residence. User groups are usually recruited from one or more villages near the forest for which they have rights. Rights are inherited by those who meet residence requirements.

We will now discuss the nature of use-rights. (Use-rights are defined here as claims to use which other users accept as legitimate). A major problem here is that it is difficult to define the abstract principles behind rights. For example, use-rights may be based on residence, or on inheritance from earlier residents, or on some other criterion. Unless there is a conflict involving forest access by a resident it is may be impossible to obtain clear evidence that the principle is something other than residence.

Allowing for this cautionary statement, our evidence suggests that residence is the primary principle underlying use-rights. However, a lineage basis for inheritance of use-rights may apply to small patches of forest of a semi- private nature.

In Ward 3 of Majhi-Pheda Panchayat there is a large patch of private forest which is described as being owned by a lineage. In fact, the forest is owned by members of a single household, but the sons of the household head are regarded as share-holders. Presumably, when the current household head dies the household will split into several households. The forest could then be used cooperatively, without sub-dividing it into patches. In that sense it will be lineage-based, although the lineage involved will be very shallow in generational terms. In this case something resembling lineage tenure exists, but is merely an extension of private tenure.

As far as this study is concerned, in all cases where forests are locally regarded as communal property the principle underlying user group affiliation is residence. People invariably describe use-rights in terms of residence. They say, for example, "*The people from this ward and a part of that ward are users*" or "*The people from these three villagers are users*". The user groups frequently cross ward or panchayat boundaries and generally include a number of settlements with relatively easy access to a forest. Disputes about rights of access occur between settlements rather than within settlements. Where such disputes are inter-caste disputes this seems to be primarily a result of the differing residence of the various castes. Disputes within settlements tend to be concerned with misuse of rights rather than the existence of rights.

We are arguing that residence is the basis of rights rather than caste or lineage. Yet, to a considerable extent, residence is a function of caste. If all neighbours are *Tamangs*, then how can the possibility that access is allowed on kinship (or caste) grounds be ruled out? People often do not, or are unable to, talk about rights in terms of abstract principles. It is often possible to ascertain underlying rules only when a conflict occurs. However, since there are cases where caste or lineage are clearly <u>not</u> the basis of use-rights, residence can be considered to be the simplest criterion for use-rights.

While use rights and membership of a user group are mostly determined by residence in cases considered within this case study, this generalisation may not be valid everywhere in the project area. Most of the systems examined are in areas with mixed Hindu castes or a combination of Hindus and other ethnic groups (Buddhists). There is some evidence that lineage-based forest management systems exist in pure Buddhist areas outside of the project area (Von Furer-Haimendorf 1975). Further, one or two small systems (Jackson 1987) dominated by Tamangs have been documented in the project area. Although these have not been explored, use rights in these cases may be based primarily on lineage membership.

The boundaries of user groups and the nature of use rights are much more clearly defined when a formal structure develops. This is particularly the case when a *manapathi* system exists, probably because people are much more jealous about their rights when they pay to protect them. Another factor which has an effect on user group definition is whether the system is focused on protection or utilisation. The user group is large and rather loosely defined in Nala-ko-Thulo-ban (Case 1), probably because the main focus of activity is protection. We would expect it to become much more tightly defined when utilisation commences.

Secondary Rights

The concept of secondary rights refers to a situation in which people, apart from the group of people with full rights, have partial rights to forest products. In several systems in the project area, separate users with secondary rights are recognised. In Mahankal Ban (Case 3) the primary user group was clearly defined, but others (all others, in theory, if not in fact) had rights to specific products (grass and fruit) and also had free access to grazing. At one stage the primary user group was clearly delineated by a shared obligation to pay forest watchers.

In *Harre ko Ban* (Case 5) there is a group (specified in term of ward residence) who have a secondary right to collect leaves, but no other products. There are also situations in which land regarded as private is open to others during particular seasons. One example of this is the case of the ritual practice called *bhumi-puja*. *Bhumi-puja* has a major role in the management of some forests and grazing lands. Literally the words mean earth-worship. In the broadest sense *bhumi-puja* is a form of propitiatory ritual, concerned with winning divine favour and obtaining good crops, controlling bad weather and so on. *Bhumi-puja* focuses on the worship of the female principle, the Earth-mother, and is concerned with all aspects of the fertile earth - agricultural fields, forests and pastures. *Bhumi-puja* occurs mostly in *Jestha* (May-June), the month before the beginning of the rainy season. The rainy season brings calamities (landslides, flood, disease). It also increases natural resources (forest, pasture, water, crops). Thus, *bhumi-puja* has a role as a propitiatory ritual. However, in addition to this broad function it has a role in forest and pasture management.

In Ward 6 of Majhi-Pheda Panchayat there is one relatively large patch of forest, locally regarded as private forest, which is owned by a Tamang. In this case the land is claimed to be private, but is not legally registered as private land. The forest is regenerated natural forest on land previously used for agriculture, and has some very big trees and good regeneration. It is striking that an area of almost completely treeless grazing land borders the forest. Within the

forest there are various shrines and trees protected for religious reasons. Other trees are pruned or cut by the owner or by others with his permission. Looking at this forest as an isolated patch of private forest it would be plausible to see the propitiatory role of the ritual as the main function. Here a private individual effectively manages a patch of forest he claims as his own. He performs rituals to provide a supernatural back-up for his skills. It is also possible that *bhumi-puja* is a way of seeking supernatural protection of private land from outsiders.

In Ward 4 at Majhi-Pheda there are substantial amounts of treeless land used as pasture or for growing fodder. Officially the land is owned by the Government, but locally many patches are regarded as private *kharbari* (fields for growing hay). For these fields *bhumi-puja* has a scheduling function. The cycle begins in *Jestha*, just prior to the monsoons. From this time *kharbari* can only be cut by the owner. In fact, however, there is little grass until the monsoons start. Following the monsoons the landowner cuts the grass for hay. Once he has done so others are free to graze livestock on the fields. In a sense the land becomes open-access. The cycle ends at the beginning of *Jestha* as the peak period of *bhumi-puja* occurs. Besides occurring at the time when propitiating the gods seems most necessary (just before the monsoons), the *bhumi-puja* signals that the land is again closed to everyone except the owner. In this sense, then, *bhumi-puja* marks not only a change in seasons, but a change in tenure, or at least access. The notion of land effectively being open for grazing in some seasons and being private in others is seen in a modified form in Chaubas. The land in Wards 5 and 6 of Chaubas is mostly *bari* land, unirrigated or subject to monsoonal irrigation. Water availability remains a very serious problem and, along with the lack of grazing land, was identified as the main problem by villagers. Almost all fodder is supplied through stall-feeding. The only "common" grazing land consists of two small degraded patches at the bottom of the valley near the river. Some grazing land is private land and some farmers allow "neighbours" to use fallow agricultural land. However, the exact basis of access in these cases was not clear. For example, neighbours with cows grazing one plot of such land were of the same caste (*Tamang*) as the owner, but he asserted that they were allowed to use it as neighbours, not because of their caste or lineage. Elsewhere in the area, some people insisted that they would not allow any others (even neighbours) to graze animals on their land. The nature of seasonal secondary rights is open to interpretation. Jodha (1985) refers to seasonal changes in access to grazing land in Rajasthan as a seasonal common property regime. It is also possible to interpret this situation in terms of tolerance on the part of an owner of private land rather than as a recognised secondary right (Fisher 1988).

The Effectiveness of Local Systems

While local systems appear to be relatively common, their effectiveness needs to be analysed separately.

Effectiveness in resource management has two components. The first is production; the second is sustainability. In commercial plantation forestry, effectiveness might be assessed in terms of optimum biomass production. On the other hand, a community forest, the products of which are used for domestic consumption, might be more appropriately assessed on the production of a particular desired product such as firewood or fodder.

In this study effectiveness is defined first in terms of sustainability: is the forest healthy or degrading? (The health of a forest may be indicated by the presence of trees in various stages of regeneration). The second criterion is utilisation. Under this system of classification there are four broad possibilities:

- A degraded former forest with no regeneration and few products for utilisation.
- A degrading forest, with no regeneration and utilisation of more production than is sustainable.
- A regenerating forest with no utilisation of products, i.e. a recovering forest, probably under protection.
- An intact or regenerating forest with controlled and sustainable utilisation of products.

Nowhere in this schema have we mentioned optimum production. This is no more than a gross categorisation for use in rapid appraisal. Within categories three and four it is possible to further classify the effectiveness of systems according to the conservatism of utilisation. In terms of this crude classification, what can we say about indigenous systems?

1. Most of the systems studied fall either into category 3 (regenerating, no utilisation) or a sub-category of category 4 (regenerating, very conservative utilisation e.g. leaves, grass, dry products, but no cutting of green wood). This conclusion tends to suggest that indigenous systems are usually concerned with protecting forests rather than at distributing products. However, it does not suggest that they are unable to do so. The conservatism of the systems observed may be a reflection of the particular point in time at which they were observed. At present there may be very few indigenously protected forests ready for extensive utilisation. In some cases (Hokase Bazaar, Case 3) no usable resource exists. In other cases (Nala-ko-Thulo-Ban, Case 1), a point of transition seems to have been reached.

2. Religious forests are generally in a sub-category of Category 2. Large trees are present, but all other products are used and there is little or no regeneration.

It may be that the conservatism of most indigenous systems relates to the organisational difficulties involved in a transition from one purpose to another, that is, from being concerned with protection of a degraded resource to being concerned with utilisation of a regenerated one. It may also be that awareness of the legal constraints involved in cutting green wood leads to considerable inhibition here. In the case of Nala-ko-Thulo-ban the forest committee has recently approached the DFO for permission to commence pruning. The fact that they have not done any pruning previously may be the result of concerns about illegality. On the other hand, difficulties in establishing a sustainable distribution system for a large and heterogenous user group may have led to these inhibitions. Similar explanations may apply in Mahankal Ban (Case 2), although the reluctance of local leaders to release control may be another factor.

Indigenous Systems and Continuity

One of the most striking findings of this study is that the indigenous forest management systems studied have invariably commenced in the post-Rana period (that is, since 1950). In very few cases is there evidence of formal structures lasting for more than six or seven years. (Case 1. Nala-ko-Thulo-Ban is an exception.) It also appears from interviews with elderly informants that much deforestation had occurred in the later years of the Rana period. After the end of the Rana period there was a period of political chaos in Nepal, which ended around 1958. This seems to have been reflected in a paralysis of local organisation in forestry. Several informants reported near-anarchy in terms of forest protection in the period. Within a few years of the establishment of the Panchayat system (in 1960) there appears to have been an upsurge of interest in forest protection, although this did not often lead to formal structures.

We suggest that the emergence of **genuine** indigenous forest management systems on a large scale in recent years was a phenomenon resulting from specific historical circumstances. These circumstances were political, environmental and demographic. Before outlining this argument, we should emphasise that there is little or no evidence for the existence of genuine indigenous systems before the end of the Rana- period. We have already shown that the systems which did exist were externally-imposed and were, in any case, more concerned with revenue collection than with forest management.

Furthermore, this study found little evidence of major continuity between the old *Talukdari* System and contemporary local systems, although there are some connections. The old externally-imposed system appointed prominent local people as functionaries and some of these prominent people have been involved in later indigenous activity. In Banskharka Panchayat (Sindhu Palchok District) a very strong locally initiated (but to some extent externally-supported) forest protection regime exists. The key mover in this is the *Pradhan Pancha*, who was himself a *Mijar* under the Rana System (D.A. Gilmour, pers. comm.). In Syaule Panchayat the persistence of grazing rights originally held by local *Mukhiyas* has been a major constraint against successful externally sponsored forest development activity. In Phulbari Panchayat (Kabhre Palanchok District) the *Pradhan Pancha*, who is a project employee, has been a prominent leader in forestry development. He is a nephew of the former *Mukhiya*. Thus, while there are continuities with the Rana-System, as far as forest management systems are concerned, the continuities are in the form of a changed role for old personnel rather than structural continuities.

Gilmour (1987) has suggested that the emergence of indigenous forest management systems relates to relatively limited availability of forest resources. He has proposed a model which sets out four stages of resource availability running from easy access to scarcity. The argument is that people in places with easily available forest resources are unlikely to participate readily in forest-related development activities and are unlikely to become involved in setting up indigenous forest management systems. Conversely, the more inaccessible resources are, the more participation in development activity and/or indigenous management is likely. In this context, scarcity of resources relates to the amount of effort involved in obtaining resources not to the absolute quantity of resources. According to the model, people will not react to an inadequate resource until it becomes hard to obtain. A corollary of this hypothesis is that planting of trees on private land is a response to shortage of common forest resources. Another way of looking at the argument is in terms of transaction costs: people are unlikely to invest time and energy in organising access to a readily accessible resource. The hypothesis that participation in forestry development and management is correlated with scarcity is highly plausible, and is supported by considerable evidence from this case study. The evidence is summarised in Table 5.

While this evidence supports the general direction of the model, the model may be somewhat mechanistic. Poor accessibility may be a **necessary** condition for participation, private planting and local institution-building, but it is not a **sufficient** condition. Organisation of responses does not happen automatically, but has sociological preconditions as well as physical ones. For example, such factors as a relatively homogenous group of users, or a strong local leader, are important.

In any case there is considerable evidence from the study that indigenous resource management systems emerged **in response to** perceived shortages. This has been explicitly stated again and again by informants. For example:

Previously there were dense forests here and there. With increasing population and households the existing forest started to degrade. People were cutting down trees as they wished. When the forest started to vanish, then there were only two options, whether to settle in the village or to migrate. Because of that we needed to protect the existing forest. In the same manner we started to protect the forest by employing a forest watcher. (Krishna Bahadur Thapa, aged 39 years, Badase)

If indigenous systems emerged only in the last few decades and particularly in the last ten years, why has this occurred? What has changed? Mahat (1985) and Mahat et al. (1987) argues very convincingly that the process of deforestation in Sindhu Palchok and Kabhre Palanchok has not been a recent phenomenon. With particular reference to the Thokarpa-Chaubas area his interviews with older local informants show that the boundaries between agricultural land and forests have not changed much in this century, although the density of forest within the boundaries may have decreased. Thus, for much of the study area, depletion of the resource pre-dated the emergence of indigenous systems by many years.

Population increase may be one explanation. The shortage of forest resources would almost certainly have been greatly accentuated by increased population. Increased population may have lead to increased pressure on resources, and, consequently to increased concern with forests. However, it is possible that the emergence of relatively effective indigenous management systems occurred only recently because political conditions have favoured them. In the period 1950 to 1958 the political situation in Nepal was chaotic and, according to at least one informant, this had local implications:

After a while, a new trend appeared beginning from the year 2007 [1950]. From that year, everyone felt that they had freedom to do anything they liked. Dacoits appeared in most of the villages. With the appearance of such a trend nobody paid any attention towards taking care of the forests. Thus the forests which started flourishing some time back [in the late Rana period] were destroyed again. In this way the condition of the forest deteriorated. Later, the Government took measures to protect the forest. The afforestation program was carried out sometime during 2015 (1958). (Man Bahadur Thapa, 84 years old, Thulo Siru Bari).

If this is correct, it is only with the increased stability which came with the Panchayat system that the emergence of consensus-based local management systems became possible. This is not to suggest that the Panchayat system set up the conditions for indigenous systems which were not possible under the Ranas. Rather, the argument is that there was no need for such systems in Rana times because there were no major shortages and/or because the externally sponsored system made them unnecessary. Following the fall of the Ranas there was a forest management vacuum. As the chaos subsided the **relative** stability provided by the Panchayat system, combined with the absence of any other effective forest management system, created conditions favourable to the development of indigenous systems.

At this point we would like to make a rather speculative aside. If the resource availability model proposed by Gilmour is applicable (and much of our evidence supports it), then it is possible that a cyclical pattern exists, or could come into being. In this model a shortage of resources would be followed by emergence of local protection. This would lead to an increased resource and local protection would break down. In turn the resource would degrade and the cycle would start again.

There is no evidence that a full cycle has happened in the past. On the contrary, the recent increase in Nepal's population suggests that the present situation is new. It is, however, quite possible that a cycle of this type could evolve. This would be empty speculation, except that a

Table 5. **Applicability of the Resource Availability Model to Settlements Covered in the Case Study**

Panchayat	Settlement	Resource Situation	Responses
Badase	Badase	Relatively scarce forest resources about 1980	Indigenous Management system commenced about 1980. Well protected natural forest by 1987.
Thangpalkot	Chillaune	Accessible high altitude forest within few hours walk	Plantation activities poorly supported
Chaubas	Chaubas Bazar	Very poor resources 9-10 years ago but available in nearby panchayats.	Strong support for plantation activities.
Rabi-opi	Settle-ments near nursery	Large degraded natural forest, relatively accessible	Little interest in plantation activities.
Majhi-Pheda[a]		Shortages in past some areas failed due to disputes over tenure	Support for planta-tion in areas but
Mahadebtar	Mahadevtar Mundagaon	Resources available from altitude forest, but at considerable distance.	Little interest in forest protection and plantation, but local factionalism a barrier to development.
Syaule	Sano Okhreni Phursre	Resources available from nearby high altitude forest	Little interest in plantation; many plantation have failed
Thulo Siru Bari	Settle-ments in Ward 1 & 2	Severe shortages in mid-late 1970's in establishing management agree-ment due to top down approach.	Very successful plantation protection program but problems

Note:
a. Comments refer to Panchayat as a whole.

clear implication of the resource availability model is that a static equilibrium between resource and human population is unlikely since the mechanism linking the two (an institution concerned with forest management) only operates under conditions of scarcity. Fluctuation, around a point of equilibrium, must follow. External factors (such as increasing population, control by a centralised bureaucracy, possible alternative sources of energy in the longer term) will probably prevent these fluctuations from developing into repeated cycles, but, in the shorter term, equilibrium is not likely, whatever form the inequilibrium takes. The implication is that indigenous forest management systems are not self-regulating systems.[4]

Participation, Equity and Distribution

It is often argued that attempts to develop new local forest management systems must take into account women and the poor. This is sometimes argued on moral grounds (Hobley 1987), but can also be argued on practical grounds. The argument is that the people who actually collect forest products must participate in the management process, or otherwise they will not follow unrealistic prescriptions (Fisher and Malla 1987).

This observation should apply as much to indigenous systems as it does to externally-sponsored ones. Unfortunately it is difficult to define just where decision making occurs in indigenous systems. Formal committees are not a necessary feature of indigenous systems but where they occur they tend to be predominantly male (and largely made up of dominant castes) it is doubtful, however, that committees are a major locus of decision-making.

In Badase, *Sarkis* (an untouchable caste) within the user group admitted that they did not know about attempts to reform the local committee, but they were pleased to hear about these attempts and were quite happy to continue contributing to the *Manapathi* system. (There were no *Sarkis* on the committee). Perhaps the committee was not seen to be centrally important.

Equity of distribution products is a major factor impinging on any resource management system. Dani and Campbell (1986) framed the following hypothesis:

> **Increased equity in distribution of resource benefits, within the limits of social acceptability, encourages greater participation by user groups.**

It is also supported by evidence from this study. A crucial difference observed between indigenous systems and externally-imposed ones (see next chapter) was that distribution in externally-imposed system was often biased, whereas few complaints occurred in indigenous systems.

A major exception to this is the case of Mahankal Ban (case 3)[5] . This is an extremely effective protection oriented regime. In fact, protection is almost too effective, in that the forest has great scope for increased utilisation. In late 1988 preliminary efforts to encourage the negotiation of a management plan allowing utilisation of forest products evoked surprisingly little

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4. Acharya (1984) sets up self-regulating systems and open access as alternative models for indigenous forest management in a panchayat near Pokhara. He argues that the situation is somewhere between the extremes. This is almost certainly true, but it misses the point that indigenous systems may be inherently imperfect: systems come into existence because a lack of earlier management has led to a shortage of forest products and they break down after protection has resulted in increased availability of resources.

5. Hobley (1987) discusses another indigenous system in which inequity was a feature.

enthusiasm among some villagers (Fisher and Singh 1988). It was later realised that the villagers who expressed this reaction all came from a dominant faction which apparently benefitted from a conservative protection-oriented system. the reasons for this included the fact that the members of the faction (all relatively wealthy), had trees on private land. Limiting access to products in a "community" forest was probably part of a system which allowed them to dominate poorer villagers. It appears that a major factor here was that they allowed poorer people to cut trees on their private land in exchange for cheap labour. Allowing increased access to products on common land would have reduced their capacity to control labour.

In this situation the required consensus (or, at least, grudging consent) about forest protection was present. While benefits from the forest were fairly equal (little for anybody), it is probably stretching the point to see the **situation** as being equitable, since the result of equal (but low level) access to common property was to enhance the dominance of a few people.

This case, however, does not falsify the view that reasonably equitable distribution of benefits is a feature of effective systems. We suggest, however, that changing the system from protection-orientation to utilisation orientation may drastically alter the balance of power.

Except in the case of Mahankal Ban, there were no complaints about unfair treatment by women or lower caste people within the systems studied. On several occasions people said that exceptions to rules were made (or rules were ignored) to enable poor people to get access to forests. Such statements are difficult to verify, but there does seem to be a high degree of tolerance of the needs of the poor.

All of this sounds somewhat romantic: left to themselves, people work together and go out of their way to help the poor; conflicts are relatively rare, etc. In fact there is no suggestion here that everything works fairly if rural people are left to themselves. We are talking only about **working** indigenous systems. If reasonable consensus and equity are necessary preconditions for the continuation of an indigenous system, then there simply would not be a **working**system where equity and consensus were absent. The importance of consensus was discussed earlier. Maina Bisauni and Ganeshthan forests in Badase show that systems (or at least the formal organisational aspects of systems) can collapse when disputes actually occur.

Conclusions

Analysis of indigenous systems covered in this case study shows that they are relatively common, and that they are often effective, particularly as protection regimes. However, they are recent innovations and are very conservative in terms of product utilisation. It is, therefore, unrealistic to regard them as sacrosanct. They are in a continual process of change and may adapt to outside interventions. Nevertheless, they do provide a model for viable local resource management institutions. The important thing is to ask what makes indigenous system effective and how can we build on them.

The main factors which tend to lead to viable indigenous forest management systems are:

1. consensus that there is a need to protect forests and about the means of doing so.
2. a relatively small and homogeneous user group with mutual recognition of use-rights.
3. relatively equitable distribution of products from the forest.

Two related features of indigenous forest management systems have major implications for agencies involved in community forestry. The apparent tendency for systems to be fairly short-lived responses to shortage and the emphasis on protection suggest that some institutional changes

may be necessary if local management is to involve a balance between protection and utilisation it is probable that the institutional changes required may not be major ones. Possibly, the granting of formal legal authority to harvest forest products to existing user groups may remove some major inhibitions. These issues remain to be explored.

3

EXTERNAL INTERVENTIONS: APPROACHES AND CONSTRAINTS

In the previous chapter a picture of the range of indigenous forest management systems which exists in Sindhu Palchok and Kabhre Palanchok has emerged and some factors which contribute to their success have been identified. The aim of this chapter is to examine some cases of external interventions in forestry development in order to consider why things have worked in some places and not in others. The chapter begins with an examination of two areas where forestry development has been very successful in establishing **new** forest resources (through plantation), but where limited progress has been made towards full hand-over of authority for management and utilisation of the forests. It then moves to a brief examination of reasons why success has been very limited in some areas.

Case Studies

So far in this report, the word management has been used primarily to refer to the **management of forests** themselves, rather than the **management of** forest **development**. It is appropriate, at this point, to shift emphasis to a discussion of the ways in which rural people have, and have not, been involved in planning forest development and forest management.

Chaubas

Although older informants in Chaubas remember extensive forests in their childhood, the area was almost totally deforested in the three decades prior to the commencement of forest development in 1978. In that year, local residents approached the DFO and a Government nursery was established. Since the first trees from this nursery were planted (in 1979) an estimated 200 ha (Carter 1987a) has been planted in Chaubas panchayat, mostly on ridge tops which were grazing land before plantation commenced. By 1987 the older plantation sites were well established. In fact, some pruning was authorised as early as 1984.

At the earliest stages of plantation in Chaubas the stimulation seems to have come from one or two residents and the DFO. Nevertheless, the remarkable success of the plantation program which has transformed the entire Chaubas landscape, is evidence that local people supported the program, since protection requires people to actively refrain from cutting green products and from allowing animals to graze in the forest. Further, the labour for plantation at Chaubas was, until a change in policy in 1980, provided voluntarily by villagers. (After 1980, NAFP, reluctantly following the precedent set by other projects, also began to pay for planting.) Thus, participation by villagers was a feature of plantation establishment. There is little evidence, however, that many villagers had a major role in decision-making.

In 1984 a Panchayat level forest committee was established. The members were appointed by the Panchayat and confirmed by the DFO. This committee now[1] as a major input into management of the forest resources. The main features of the management system are:

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1. This account of Chaubas refers to the situation at the end of 1987.

- People are not allowed to graze any animals in the forest or to collect any forest products themselves.

- Breaches of these rules are punished by compulsory labour in the nursery or during planting. However this remains largely theoretical since there are, reportedly, very few breaches.

- Forest products are collected by the forest watchers and sold. A system of annual cutting of lower branches (under 2 metres or one third of total height) has commenced and the resulting firewood is sold for *50 paisa* per *bhari* (head-load).

- The forest watchers who do the cutting receive one *bhari* for each day's work (amounting to six *bharis* each during the cutting period prior to the field visit).

- The remaining *bharis* are sold on a first come first served basis until the supply runs out. (This, of course, favours households with a lot of available labour).

- People from ward numbers 1,2,3,5,6,7,8, (but not 4 and 9) use the products. They would be available to others, but no one uses them, probably because of distance.

This system appears, at first sight, to involve a high degree of local participation. However, this is, to some extent, illusory. Firstly, the committee does not have authority to initiate pruning. This can only be done at the discretion of the DFO. Secondly, while the forest committee is fairly active in forest development work, it is effectively dominated by nursery staff. The nursery staff, including nursery workers and plantation watchers, are all employed either by the Department of Forest, or by the project. The number of forest watchers or nursery staff who are elected members of the panchayat is quite noticeable and, at the time of the first OMRD field visit, included the *Pradhan Pancha* and several ward chairmen. The *Pradhan Pancha* was a Senior *Naike* responsible for several nurseries including Chaubas. He resigned from the Project late in 1987.

Whether being on the forest staff is a result of good Panchayat connections, or whether forest staff are elected because of the influence working in forest development gives them, is a moot point. However, a connection between control of the forest resource and local political power, is evident. An important implication of the relationship between forest committee membership and employment by external forest development agencies, is that control of forest resources is concentrated in a few hands.

There are strong indications that the products of the forest are not being widely distributed. In the third pruning period (1986), 520 *bharis* of firewood were collected. This included 120 given to forest watchers as payment for cutting and 400 distributed to members of the seven wards of users. This means that the 400 *bharis* had to shared between perhaps 250 households. It is known that the nursery employees and forest watchers obtained some of these 400 head-loads as well. Whether they obtained a large proportion or just a few is not known. Even if it is assumed that all of the 400 head loads were divided equally amongst the user households, the average amount of firewood per household would be less than two head loads per year, which is rather a small proportion of the total household requirement of between 35 and 50 head loads per year.

There is no suggestion of dishonesty or corruption within the forest committee. However association with the nursery or the committee may lead to increased access to resources by individuals.

It is significant that the forest committee was not set up until 1984. Prior to that, protection was carried out by local employees of outside agencies with the apparent consent of the villagers. (The fact that effective protection occurred is clear evidence that people voluntarily refrained from using forests, since externally imposed protection seems never to be an effective deterrent in itself). It was only when utilisation of forest products came under consideration that a committee was formed.

Organisationally, there are interesting contrasts between the heavily externally-supported (if not initially externally-sponsored) development of forest resources in Chaubas and the successful indigenous systems examined earlier. Firstly, the forest resource at Chaubas is a large new resource, a planted forest not a natural one. Most of the indigenous systems discussed refer to natural forests, however degraded. Secondly, as it is a Panchayat level resource, the user group is much larger than usual.

There are also some interesting parallels with indigenous systems. The underlying common perception of the need to do something and the underlying local agreement about the solution is consistent with what we saw in indigenous systems. It is also apparent that the capacity of the nursery-centred organisation for handling utilisation and distribution is much less than its capacity for encouraging protection. There are serious doubts as to whether equitable distribution has occurred previously or will occur in the future under the current method of organisation.

Interestingly, following the first three pruning- distribution exercises there was a long gap before the DFO approved the fourth. During this time illegal pruning of trees emerged as a problem perhaps for the first time in the Chaubas plantation. This was attributed by some as being a result of concern about the delay in providing products. It may, just as easily, be a reaction against the non-equitable distribution of products by the Committee.[2]

At a late stage in the preparation of this report a further pruning exercise was being arranged, using a revised distribution system. The details are not available.

Thulo-Siru-Bari

Thulo-Siru-Bari is another case of a Panchayat in which a previously deforested area is now relatively well forested. As with Chaubas the major resource at present is new plantation forest, mostly of pines, although the Panchayat also has some large patches of natural forest. It has been estimated that there are now at least 200 ha of plantation forest in Thulo-Siru-Bari (Carter 1987b).

The early stages of externally-sponsored forest development clearly worked well. The minimum conditions of perception of need and consent were present. However, attempts to set up an externally-sponsored forest committee to manage utilisation of forest products struck major difficulties.

The first attempts to set up a mechanism for utilising the plantation resources of Thulo-Siru-Bari occurred in 1986 and were initiated by the project and the DFO. Meetings between staff from the Department of Forest and the Panchayat took place and a Forest Committee was set up. This lapsed in early 1987. Late in 1987, a new committee was set up with a newly elected Pradhan Pancha as Chairman. The election took place at a meeting between the Ranger and the "community".

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2. At a late stage in the preparation of this report a further pruning exercise was being arranged, using a revised distribution system. The details are not available.

In fact attendance at the meeting was limited to people who happened to be around at the time as the meeting was not announced in advance. Further, among the people elected to the committee several were absent. A decision was made to prune a section of forest. Each household was to be allowed to cut 90 kg, for which there would be a fee of *5 paise* per kg. It was intended that access would be allowed on a rotating basis, with people from various wards collecting firewood by turn.

A field visit by the researchers for this case study occurred, by coincidence, only a few days after the meeting. Interviews with people in Thulo-Siru-Bari panchayat showed that the nature of the arrangement was poorly understood, even by those who had attended the meeting. One *Sarki* who had been elected to the committee knew no more than the price of firewood and the distribution date. Generally the *Sarkis*, even if they knew about the arrangement, had little confidence that they would benefit. The arrangement also created concern about possible future charges for collection of products from natural forests.

The pruning arrangement and the committee set up to control it were a case of a heavily top-down decision making-process. There was little local understanding, and great concern about equitable distribution. Probably as a result of the non-participatory nature of the exercise extensive illegal cutting took place before the authorised pruning exercise began.

Discussion

The problems in Chaubas and Thulo-Siru-Bari are of a somewhat different order. In Chaubas the forest committee is something of a benign local oligarchy. In Thulo-Siru-Bari major factionalism and extreme lack of confidence in the imposed management system go hand in hand. There are some important parallels and contrasts in the two situations. Features in common are:

- In both cases there is a large newly created resource of plantation forest for which use rights are not clearly established.

- In Thulo-Siru-Bari use-rights have been decided administratively, not by negotiation. In Chaubas there appears to have been some negotiation about use-rights within the Panchayat.

- Decision-making in Thulo-Siru-Bari took place at a meeting of the community, which, in fact, was little more than an accidental gathering. The decisions were made abruptly, with no attempt to seek the views of users, or even to make sure that the issues were properly discussed. At Chaubas the whole process was much more cautious and people had a much clearer idea about what was going on. The relatively greater level of local participation in forest management oriented decision-making in Chaubas is evidence that local initiatives can, to some extent, function within externally-sponsored structures, providing time is given for negotiation and internal adjustment.

- The size of the user groups is very large in each case. This may not present a crucial problem for protection, but seems to be a serious problem in utilisation and distribution. (For a similar reason the change of the large indigenous system at Nala-ko-Thulo-Ban from a protection-orientation to a utilisation-orientation may be very difficult.)

The two cases outlined above are cases where the process of plantation and protection involved a substantial degree of local consensus. The fact that difficulties are being experienced in transferring effective control and in developing systems for utilisation and distribution should not be allowed to obscure this important point.

The rather far-sighted philosophy which underlay the early activities of the Department of Forest and the project in Sindhu Palchok and Kabhre Palanchok was developed intially by I B.S Mahat (Campbell and Mahat 1977). It was based on a strategy which assumed that activities should occur only where people were *"already strongly motivated toward community forestry"* (Campbell and Mahat 1977, 4).

This strategy was very successful in a number of areas. There is a close correlation between areas where plantation was successful and where strong local motivation exists. The existence of areas where plantation and protection have been less successful is related to the absence of the "motivation" regarded as essential by Campbell and Mahat. It may be that the underlying philosophy has been somewhat lost as the planting program has become very big. It is likely that the expressed interest of a few (particularly political leaders) has sometimes been confused with broad-based "motivation".

Unsuccessful Interventions

Evidence from this case study suggests that project interventions at the level of plantation establishment, tend to be unsuccessful when support and motivation are lacking. Motivation, however, should not be seen as an independent variable. It is a response to other circumstances. People tend to be unmotivated or negatively motivated either because (1) forest products are relatively accessible and there is no particular reason to become involved, or (2) because of disputes over tenure of plantation land.

Alternative Accessible Resources

In Chapter 2 there was a discussion of the resource availability model proposed by Gilmour (1987). Evidence from this case study supports the finding that indigenous forest management systems are more likely to be present when resources are insufficient than when they are readily available. Similarly, as Gilmour's model suggests, support for outside interventions is most likely when resources are not readily accessible.

Among the settlements selected for examination in this case study were the adjoining settlements of Phusre and Sano Okhraneni in Syaule Panchayat and the settlement of Chillaune in Thangpalkot Panchayat. All of these settlements are situated on the fringes of Chyo Chyo Lekh in Sindhu Palchok District. In each of these areas, a relative lack of success in plantation establishment is at least partly a result of the existence of relatively accessible high altitude forests only a few hours return trip away.

Tenure Problems

In the cases of Chillaune and Syaule a second factor was at work which substantially limited motivation. In each case nurseries now exist with little local support. The major constraint to successful plantation in each case is that some of the land used for plantation is locally claimed as common or private grazing land.

Tenure disputes occur in a number of places in the project area, besides the two mentioned. In Majhi-Pheda planting has taken place on undisputed land, but there has been great resistance to planting on some plots of land where villagers strongly assert that their rights and needs are ignored. In Chaubas there are also disputes over tenure or use-rights in regard to some patches of plantation forest.

However, the effects of such disputes vary. In Syaule there has been a lack of interest in plantation activities, and a tendency to ignore restrictions against grazing. In Chillaune the result has been outright antagonism against the nursery, blatant flouting of grazing restrictions in planting areas, deliberate destruction of seedlings and several violent incidents.

A clear finding of this case study has been that planting on land used for other purposes or land with disputed tenure has been a major reason for failure of reforestation.

Discussion

To look for evidence of local motivation before initiating forest plantation activities is, as Campbell and Mahat (1977) suggest, a useful strategy. The success of forest plantation and protection at Chaubas and Thulo-Siru-Bari suggests that the people were "motivated toward community forestry" at the beginning.

However, it also appears that something more is needed for utilisation and distribution of forest resources. The missing factor is the need for functioning local institutions which operate with the full consent and understanding of the users. It would seem, from the cases of Chaubas and Thulo-Siru-Bari, that a role in actual decision making is necessary. In Thulo-Siru-Bari this was totally lacking and the outside intervention was heavily top-down. In Chaubas the process, although hardly "indigenous", at least involved an active local committee.

It seems that the participatory process must be much more active for management systems involving utilisation to operate because something more than passive cooperation (i.e. not cutting down trees) is needed when forest products begin to be distributed.

4

IMPLICATIONS AND CONCLUSIONS

The principal objective of the case studies in the program "The Organization and Management of Rural Development" is to carry out an examination of resource management systems within the context of the development process and the dynamics of change. In this particular study the objective was seen as a way to achieve insights into ways in which forest development can utilise and learn from existing institutions. There are a number of important conclusions.

- Indigenous forest management is quite common within Sindhu Palchok and Kabhre Palanchok, particularly in patches of natural forest.
- Indigenous systems have generally developed relatively recently, especially in the last thirty years. They appear to have developed in response to a shortage of forest products and due to a lack of effective forest management institutions at the national level.
- Although some systems have formal organisational features (such as committees) the essential features of effective local forest management are mutually recognised use-rights and institutionalised rules. The absence of formal structure is not evidence that there is no local management.
- Sponsored forest management organisations often exist without the institutional substratum necessary to ensure success. They frequently fail to adequately identify existing use-rights when establishing plantations.

We will now turn to a discussion of some implications of the study to future forestry development activities in Nepal.

Getting it Right at the Beginning

The failure of forest development activities has often been associated with inadequate understanding of local conditions. Plantation has taken place on disputed land and existing and viable management systems (often because their existence has not been recognised) have been ignored. Before any activities occur, informal (but thorough) survey of needs and problems should be carried out. No nursery should be established (or maintained) without broad local support and no plantation should occur without thorough examination of land tenure. Formal consultation with elected officials is necessary, but it is not sufficient.

The difficulties experienced in the case of Thulo-Siru-Bari in changing effective protection systems to management and utilisation systems provide an object lesson here. Had agreements been established with user groups and had transfer of control to user groups taken place before plantation took place, the problems faced in trying to establish a viable organisational structure ten years later may have been avoided. Ten years after plantation establishment, a valuable resource exists without an effective sense of ownership or clearly established use-rights.

This is not proposed as a facile solution. Claims to use-rights on bare land used as pasture are unlikely to be the same as claims on reforested land, because the users of pasture and the potential users of a forest will almost certainly not be an identical group of people. Further claims for use-rights are likely to develop with the value of a resource (Dani, pers. comm.). Use-rights evolve and are part of a dynamic process of claim, counter-claim and recognition of claims. Nevertheless, the time to start negotiations about rights is before forest development activities are initiated.

Minimum Intervention Strategy

The clearest finding of this study has been a confirmation of the emerging view that there is a lot more going on in forest management and development in villages than development agencies usually recognise. External interventions in community forestry have tended to ignore existing structures and institutions. This is usually inefficient because something which is working is destroyed and replaced by something which is not. The implication of these observations is that there is a need for a flexible strategy which recognises, utilises and builds on existing indigenous rights and institutions. We would like to propose such a "minimum intervention" strategy.

A major constraint in facilitating local-level management of forest resources is the excessive concern with management plans. Villagers are able to manage forests effectively in many cases, particularly in terms of protection. The need for a formal management plan is a need of the outside agency, not necessarily a need of villagers themselves. In cases where reasonably effective indigenous management systems exist, external intervention is often counterproductive at worst and irrelevant at best. Even the appointment of externally-funded forest watchers may lead to the breakdown of a system. For this reason negotiating an agreement which has no relevance to the users is likely to be destructive. A minimum intervention strategy is advisable here. Such a strategy would acknowledge the existence of a system and then, effectively, leave it alone. In the current legislative context some form of signed agreement may be necessary, but removal of the need for a formal agreement before forests can be used would be a preferable long-term solution. Perhaps a simple certification by the DFO that a local system exists and that he judges it to be effective could be adequate.

The concept of minimum intervention also applies at the level of flexibility when sponsoring new, or endorsing old, structures. Because indigenous systems tend to be short-term and to change form readily, a great deal of flexibility is needed, both in formalising existing systems and creating new ones. Specifying committee membership (either in terms of ex- officio membership, sex ratios, or total membership), regularity of meetings, or the need to keep minutes, is not likely to enhance the probability of a long-term viable system. In fact, even when committees exist, fluctuating membership and irregularity of meetings are common. These features do not necessarily lead to unsuccessful forest management. A minimum intervention strategy implies a step by step approach to forest management.

Step 1. Recognise existing systems and leave them alone if they are effective.

Step 2. Strengthen existing systems when they are inadequate, perhaps by attending to problems relating to legal tenure or by providing financial support.

Step 3. Assist in establishing new institutions where necessary, but, in doing so, pay close attention to existing use-rights.

One of the dangers in labelling any strategy or approach is that it will be quickly converted to an acronym and applied simplistically and mechanistically. The idea of "minimum intervention" is likely to be seen as an easy solution. This is not the intention. Except in the case of recognising existing systems and leaving them alone, a **minimum intervention strategy does not imply minimum activity. Minimum intervention refers to the need to avoid unnecessary changes.** The level of activity required in the case of Steps 2 and 3 will probably be very high as lengthy negotiations are likely to be required. The underlying principle is to recognise what exists and to use it to the extent that it helps to achieve efficient and equitable forest management.

Conclusions

Although this study has been an attempt to carry out a thorough analysis of indigenous and externally-sponsored local forest management systems in Sindhu Palchok and Kabhre Palanchok, there are questions which have not been examined in great detail. There is a need for further study of the following issues:

1. This report has referred to the need to begin negotiations about use-rights and management before establishing plantations. In fact, it seems that complex negotiations often take place at the local level before plantation begins (see Ingles, 1988), without reference to the project or the DFO, but this processes need to be explored more fully.

2. The report has examined externally-sponsored attempts to manage plantation forests, but it has not considered indigenous management of such forests, as no relevant systems were identified in the study area. However, there are apparently some places where indigenous mangement of plantation forest occurs and study of such cases would be very useful.

3. The analysis presented here suggests that indigenous forest management systems tend to be predominantly protection-oriented. It would be useful to see whether this pattern is common throughout the hills of Nepal and, if not, what differences in local conditions lead to a differing pattern.

This report has explored the nature of village level forest resource management in the NAFP project area and discussed some of the processes involved in external intervention. It has proposed some ways in which project activity can be modified to build on existing institutions.

The underlying lesson is that there is a position somewhere between the ignorant villagers view held by some development agents and the view of the noble all-wise villager held by others. Village systems have their strengths and limitations. The role of development agencies is to recognise and build on the strengths and to help to find ways around the limitations.

ANNEX 1: METHODOLOGY

Introduction

The methodology of the case studies of the OMRD programme was initially proposed by ICIMOD and discussed at a meeting of Project representatives and Principal Investigators for each case study in February 1987. The basic intention was that an agreed methodology be applied in each case study, however it was assumed that there would be flexibility to allow for differences in approach within each case study, where appropriate. In fact, early field experiences lead to some modifications which were incorporated into the agreed methodology in a second workshop held in July 1987.

The approach adopted in the Sindhu Palchok and Kabhre Palanchok case study followed the agreed pattern, although some variations were introduced and check-lists of questions were specifically prepared for the case study. The major elements of the methodology used were as follows.

- Open-ended interview/discussions, with project personnel and selected government officials.
- Analysis of project reports and records.
- Participant observation of project activities. (As the Principal Investigator is an NAFP officer, this "participant observation" was integrated with normal duties.)
- Field investigations of selected villages within the project area. These investigations involved a team of field investigators. (The Principal Investigator accompanied the field assistants on at least one visit to each selected village.) The field investigations used the following techniques:

  a. Rapid rural appraisal (RRA) techniques such as:

  - Venn diagram, maps, transects
  - History time lines
  - Flow charts of inputs-outputs

  b. Semi-structured interviews

  c. Participant observation

  d. Interest group discussions

Analysis of supplementary villages through existing documents and interviews with departmental and project staff.

The original proposal was to study villages in two or three rounds of visits. The first round was to include 8-12 villages, each to be visited for a few days to collect initial information and develop an overview of the situation in that village. It was expected that some villages might be eliminated from the study at this stage, either because they were not as interesting as expected or because for some reason (such as the reluctance of villagers to become involved) study proved to

be impractical. The original selection was to be pared to perhaps 5-7 villages at the end of this stage In stage two more intensive study would take place.

It was further proposed that at the end of the second stage, one or two of the more interesting villages might be selected for more intensive follow-up.

The overall amount of time in each of the villages studied in stage two was planned to be approximately 7 days. The breakdown of time allocation between stages one and two was intended to be flexible, as was the overall time for each study. The importance of building rapport in the first visit meant that it would be inappropriate to be too rigid in determining the length of the visit.

In fact, the idea of subsequent rounds placing greater concentration on a decreasing number of villages was abandoned. The study involved two rounds of field visits to seven of the eight villages selected; one village was visited three times.

In addition to the villages included in field visits it was proposed that further villages be used as supplementary studies. In these cases there had already been extensive Project input and it was felt that visits by the field assistants might be intrusive and/or counter productive. However a great deal of relevant information was already available in these cases, both from study of file records and interviews with government and project staff.

Implication of Specific Arrangements Between NAFP and ICIMOD

In the other case studies in the Organisation and Management of Rural Development Program, the projects involved are multi-sectoral. The fact that NAFP is specifically a forestry project, and the fact that the Principal Investigator is a project employee led to several variations in emphasis in terms of both focus and methodology.

1. The emphasis in this case study has been on forest management and development of forest resources. Other resources and other components of development have been examined, but they have been given relatively little attention.

2. While the field work itself placed considerable emphasis on **evaluation** of NAFP and its operations (indeed, the opportunity for evaluation was one reason why NAFP welcomed the opportunity to work with ICIMOD), the fact that the Principal Investigator is an NAFP officer obviously introduces a potential bias. Because a conscious decision has been made to prevent the case study from became an apology for NAFP, this report concentrates more on the village level than the project level. At the same time a major aim of the study is to make recommendations for future project policy.

Evaluation of the Methodology

Reservations about Time Available for Each Village.

At the commencement of the case study some reservations were expressed as to the potential effectiveness of visits of approximately seven days to each village. The Programme Co-ordinator suggested that splitting time in each village into two stays would dramatically increase the effectveness of field work.

This proved to be correct. The field team found that, at the end of 5-6 days (spread over two visits), much of the information required had been obtained. A break between visits meant that the field team was able to concentrate on initial survey and rapport-building in the first visit. During the break between visits villagers apparently had a chance to discuss the study and to become familiar with its purpose. On returning to the villages team members were not seen so much as newcomers. Further, in the interim, the field team had been able to analyse preliminary findings and to decide what issues and questions were most important for follow-up. Possibly, villagers had also had time to consider issues and this may have affected the quality of information for the second visit.

While the information was necessarily fairly superficial, further advances could probably not be made without substantial increases in field-time, say in the order of stays of 3-4 weeks or longer. Given the nature of the study, and its emphasis on obtaining a compromise between very superficial survey data and intensive anthropological-style case studies, the RRA methods adopted appear to have been quite appropriate.

In order to obtain a fuller understanding of the dynamics of local resource management systems more intensive work is needed. Understanding the dynamics requires knowledge of what happens when things go wrong and an understanding of the implications of conflict usually requires much more time than was available for individual villages in this case study. It is precisely in providing information about disputes that informants are likely to be reticent, particularly when disputes are current.

Nevertheless, some information can be obtained from short field visits. The field team was present in Mahadebtar at the time of a major dispute about an irrigation system and people, at least on one side, were very ready to give their account. Unfortunately the presence of outsiders (particularly as they were linked to a major project) may have exacerbated the conflict and we were in great danger of being associated with one party in the dispute.

The opportunity for short-term visitors to obtain a clear picture of disputes is certainly limited. Given the importance of understanding conflict as a key to understanding organisational dynamics, a number of more in- depth case studies would be justified.

The Settlement as Area of Study.

A basic premise of the OMRD programme methodology was that field studies would operate on a settlement basis, rather than on the basis of political divisions. There were two major reasons for this. Firstly, the relationship between settlements and political units differs in each of the three countries (Nepal, India and Pakistan) in which case studies were to take place. The size and structure of *gaun panchayats* in Nepal, *gram panchayats* in India and administrative units in Pakistan are quite different from each other. In order to enable comparison between field data from the various case studies the settlement seemed more likely to be useful. Secondly, units larger than the settlement were likely to lead to superficial data. Again, the emphasis on seeking a compromise betweeen useful detail and broad coverage, was the ruling principle.

In this particular case study the decision to concentrate below the panchayat level certainly led to increased depth of coverage. Nevertheless, emphasis on the concept of settlement led to some difficulties.

The main problem is that the decision as to what actually constituted a settlement proved not to be at all clear-cut. Settlements in the Middle Hills of Nepal vary from villages of say 20-25 households to small scattered hamlets, which may, or may not, be given a common name as a

single village. It is, therefore, difficult to use the term settlement to define units of even approximately consistent size. The smallest hamlets are too small to be the focus of study and the boundaries of diffuse villages consisting of a number of hamlets are highly arbitrary.

The settlement was assumed in program design to be a useful basis for examing resource use. In fact, however, user groups (particularly for forest resources) often extend beyond the boundaries of single settlements and an **arbitrarily defined** settlement is not much more useful than an arbitrarily constructed political unit as the basis for analysis. For example, people in one village or settlement may be members of a forest user group along with residents of another village, but may use irrigation in combination with people from a third village. Further, not all people from a particular settlement are in the same user groups as other people from the settlement.

Given the fact that the concept of settlement is unclear, and does not coincide with a meaningful social unit at anything above the level of a cluster of closely related households, delineation of the boundaries of settlements for study was necessarily arbitrary. We defined a settlement to include all contiguous dwellings in an arbitrarily selected geographical area; either a ridge, valley or hillside. Natural boundaries (rivers, forests, major ridges) were used to define boundaries, but settlements, as defined, sometimes included adjoining areas on either side of such boundaries. The main consideration was convenience. As natural boundaries and coherent locally recognised social division did not coincide it was necessary to select an area of reasonable population (say 100 households) which were close enough to suggest a common interest in certain resources.

In fact, it became necessary to think in terms of concentric circles. The greatest emphasis was on settlements (arbitrarily defined as discussed above). Beyond this level, adjoining settlements were examined to the extent that they seemed relevant to resource availability and management within the subject settlement. For example, where other settlements also used a forest resource their role was examined, but greatest emphasis was placed on the primary settlement. The next level was the panchayat level. As the panchayat is, by legislation, a centrally important unit in development, this level was relevant to the study. Again beyond this was a concentric circle containing adjoining panchayats. This was particularly important in forestry as forests are often used by people from more than one panchayat. In fact, there is a systematic reason for this; forests are often located on ridges and around streams and rivers - the very features which tend to be used as panchayat boundaries.

Thus, while working with relatively small population was a useful starting point conceptually, it has to be borne in mind that the unit was arbitrarily defined. It was necessarily not a community in the sense of having common agreed leadership, shared resources which were exclusive to the settlement or even in the sense of having a single locality name.

Given that this particular case study was particularly concerned with forests it was inevitable that members of user groups would rarely be from a single settlement. People, after all, tend to approach a forest from whichever side it is accessible. Further, people often use more than one forest, and the usage pattern of one forest may affect other forests. For example, effective protection of one forest may depend on alternative accessible resources.

For these reasons, it is probably most appropriate to select a patch of forest (or contiguous patches of forest) as the unit of study and to work into the social structure by identifying usage patterns. While this approach would not have been immediately useful for this study, given that it was, to some extent, concerned with a variety of resources and institutions, it would be useful to direct specific studies of forest management at this level.

At the same time, whether studies of local resource management and rural development are based on the resource itself or on a settlement, it is also necessary to have a complementary concern with formal local-level political and developmental units. Thus, in Nepal, studies of forest management must be complemented by consideration of resource development at the panchayat level.

Application of Methodology to Project Activities.

The methodology used in the case study has been demonstrated to be a fairly effective way of obtaining reliable information on forest use and management systems relatively quickly. The techniques can be applied for initial information gathering as the first step in developing and negotiating management arrangements.

Further, the approach is a useful method for project evaluation. NAFP gained much useful information about the effects of project activities through the case study. Village studies, along the lines of those done for the OMRD program will be carried out as a normal part of NAFP evaluation in future.

Conclusions

As far as the methodology used in this case study is concerned there are some mixed conclusions. On the one hand the methodology has proved useful as a sort of rapid appraisal approach for obtaining a working knowledge of forest resources and indigenous forest management systems in a given area. It has provided insights into sociological and project operational factors which have limited effective development. This approach could profitably be used before forest development work commences and, as an evaluation procedure, at later stages of development activity.

Further, it has proved possible to find out a little bit about the dynamics of these systems, particularly in that a focus on oral history has taught us something about the fragility and normally short life-spans of formal organisations. Their adaptability and flexibility have been highlighted. To this extent understanding has moved beyond the largely anecdotal accounts previously available.

On the other hand no detailed analysis of the structure and dynamics of individual systems has been possible. That sort of study remains rare in the literature and would best be carried out through intensive ethnographic fieldwork.

ANNEX 2 : CASES OF LOCAL SYSTEMS OF FOREST MANAGEMENT

Case 1: Nala-ko-Thulo-Ban, Ugrachandi Panchayat, Kabhre Palanchok District

Note: This case was not studied as part of the OMRD study. Information was obtained from field notes by NAFP/Forest Department staff).

Nala-ko-thulo-Ban is a natural forest of approximately 70 ha situated on a hill-top a few kilometres from the town of Banepa, just outside the Kathmandu valley. The forest, at some points, is only a few minutes walk from a motorable road and would seen to be an easy source of firewood for sale in Banepa and Kathamandu.

There are no big trees in the forest and from a distance it may look like a degrading forest. From close up the forest appears quite healthy and has vigorous regeneration. Local informants unanimously state that about 35 years ago (at about the end of the Rana period) there was no forest at all. Thus, far from being a degrading forest, it is a regenerating one.

This regeneration is the result of a strong local system of protection. In 1953 a forest development committee was started. The committee had 14 members and appointed local watchers (called *Chitadars*). According to the founding Chairman, minutes were kept, but have since been lost.

About six or seven years ago another committee was formed. Presumably, between 1953 and the formation of the new committee, the original committee had become inactive. It is possible that there may have been a succession of committees. Again, in 1987, probably prompted by Department of Forest and NAFP activity at nearby Tukucha, permission was sought from the Range Office to create a formal Panchayat Forest Committee. The 10-member committee consists of the nine ward chairmen and the Pradhan Pancha.

Until the formation of this formal Panchayat-level committee, the organisation was very clearly an indigenous one. Permission has now been sought from the DFO to start harvesting green wood and requests have been make to convert the forest to Panchayat Protected Forest. While the indigenous organisation is, thus, in transition, it is nevertheless true that from 1953 to 1987 an effective local forest protection regime existed. The conversion of degraded land to new forest is clear evidence of this.

The user group is very large compared to other systems we have seen. People come from three wards of nearby Rabi-opi Panchayat and from most of Ugrachandi Panchayat. Only the Ugrachandi people are represented on the committee. However, one of the watchers is from Rabi-opi panchayat.

The regime emphasises protection: no green material can be cut. There is a system of sanctions operating. Primarily these involve collection of fines and confiscation of baskets and sickles. The ultimate sanction is reporting to the DFO. Formally, the forest was opened five times a year for collection of leaf and dry firewood. There is apparently no sub-division of the forest into areas for particular users - people may go where they wish. In practice, they naturally go to the part nearest their houses or fields.

In addition to one forest watcher employed by NAFP, there are four watchers paid through the *manapathi* system. Under this system users contribute grain from each household for the watchers. While the system is essentially based on payment in kind, people in Nala sometimes pay cash in lieu.

The Nala case is particularly interesting because the success of protection is strikingly obvious. It is unusual because the forest is very large and there are a large number of potential and actual users. The fact that there is little evidence of illicit pruning suggests that the protection is accepted by villagers. However, the conversion of the mainly protection oriented regime to a system allowing controlled utilisation and increased distribution of forest goods will be more difficult. It remains to be seen whether such a large system can function effectively under the changed circumstances.

While no detailed study has been made of Nala-ko-thulo-ban it is presented here as an example of an unusually large, and unusually long-lived and highly structured system.

Case 2: Ganesthan and Maina Bisauni Forests, Badase Panchayat, Sindhu Palchok District.

These two patches of forest are on the Northern and Southern slopes of a valley which runs into the Balephi Khola, a major river. (See Map 2). Ganeshtan Ban is in Ward No 5 of the Panchayat, while Maina Bisauni Ban is in Wards No 1 and 2. From about 1981 until 1986, the two forests were managed by users through a committee. Although there was a slight difference between the user groups for each of the forests, the same committee was responsible for both.

The current user group for Ganeshtan Ban includes all residents of Badase village, which consists of all residents of Ward 2 (on the lower parts of the valley near the Balephi Khola) and those residents of Ward 1 resident on the steep slope above Ward 2. Residents of Phulping, a Tamang village high above Badase but also in Ward 1, are not users. They obtain forest products from Bhoteni Ladeko Bhir, a patch of high grassland with some shrubland. Ganeshtan Ban is actually located in Ward No 5, but is readily accessible to people from Wards No 1 and 2. People living in the lower parts of Ward No 5 (adjoining the Balephi Khola) have use-rights, but those at the top of the very steep cliffs above the forests do not. Thus, users were: all Ward 2, some from Ward 1, a few from Ward 5. The user group of Maina Bisuani consists of all residents of Badase village (as for Ganeshtan) and some residents of Ward 3.

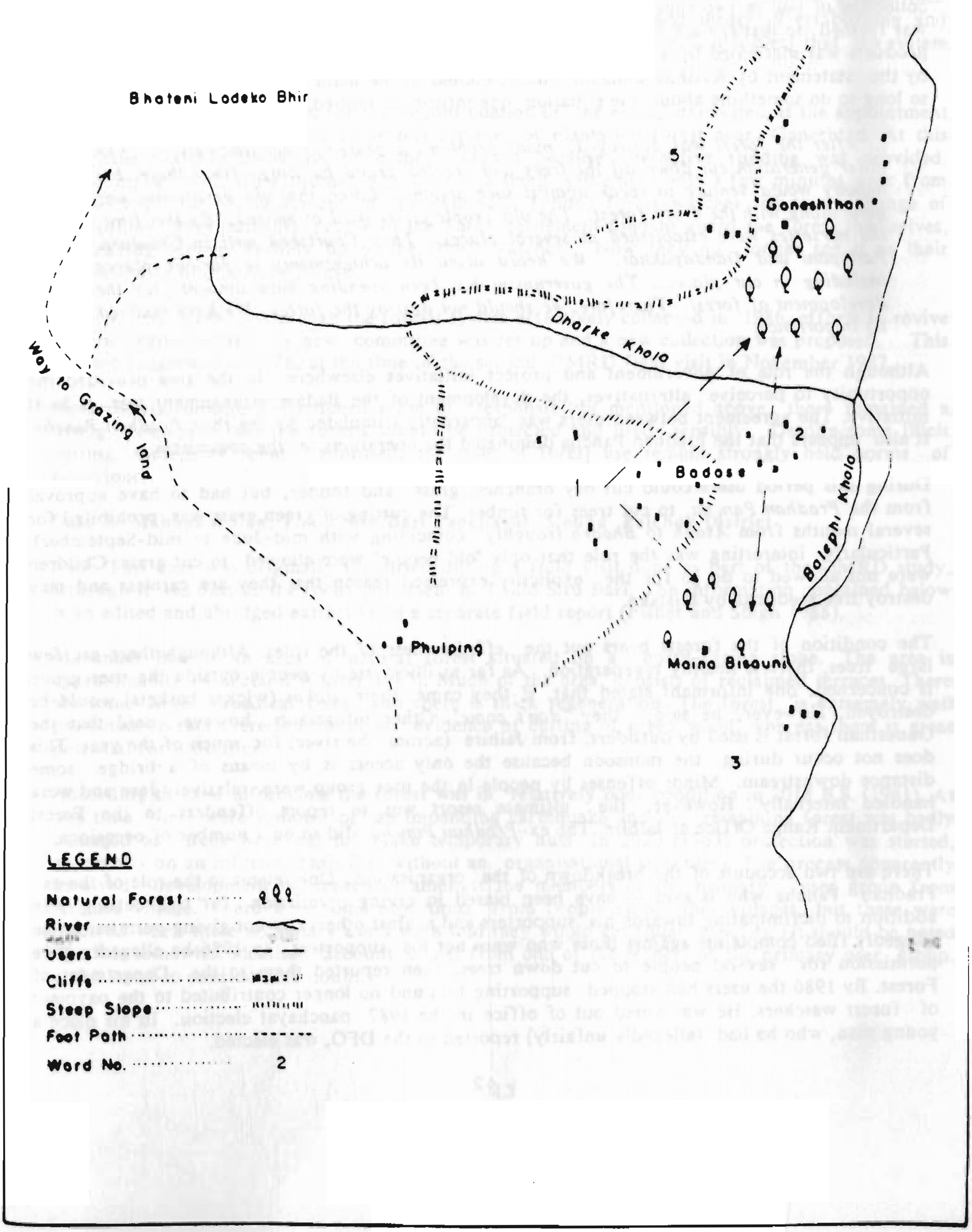
These two forests are of particular interest because there was, until very recently, an operating indigenous forest management system. There is also some information on a number of stages of forest management for the two forests. Before turning to the contemporary situation we will discuss each of these stages in turn.

Stage 1: Pre 1950. The early history is not very clear. However it is known that the two forests were granted to Sanab Singh Thapa by the Rana ruler about 100 years ago. Under his general control the forests were managed with the co-operation of *Chitadars*. From this time until the end of the Rana period tree cutting was theoretically restricted, requiring the permission of the *Chitadars*. In return for this permission, gifts were given to the *Chitadars* at specified festival occasions. According to the accounts of older villagers the area was heavily forested until the end of the Rana period. Informants attributed this to low demand due to the small population. Because there was relatively low demand on the resource, permission to cut was given fairly readily.

Stage 2: 1950-1981. After the fall of the Rana Regime, in 1950, the two forests were managed as part of a large area of *guthi* land, which consisted of seven modern Panchayats. This *guthi* was held by an influential family. Nominally the area is still part of a *guthi* grant.

MAP 2

SKETCH MAP OF BADASE SETTLEMENT SHOWING GANESHTHAN AND MAINA BISAUNI FOREST



During this period there was gradual deterioration of the forest, although in the late 1960s the situation was not too bad. However, by 1981 the situation had become critical and supplies of forest products were very limited. Throughout the period there was no effective management of the forests.

Stage 3: 1981-1986. In 1981, the users of the two forest patches began to make a monthly collection of one or two rupees per household in order to pay two forest watchers. A committee was formed to manage the forests. The decision to do something about the shortage of forest products was motivated by a perception of the seriousness of the situation. This is demonstrated by the statement by Krishna Bahadur Thapa, quoted in the main text. When asked why it took so long to do something about the situation one informant replied:

> *... After the forest was destroyed, many problems appeared in our daily lives.... The older generation cut down ali the trees and erected grand buildings from these, but nobody would venture to speak against such actions. Later, that old generation was gone along with the green forest. The old people either died or retired. By this time, the nurseries were established at several places. They flourished well in Chautara, Patlepani and Dandapakhar. We heard about its achievements in various places including in our place.... The government has been spending huge amounts for the development of forest. Therefore, we should not destroy the forest. We have realised its importance.*

Although the role of government and project initiatives elsewhere in the area provided the opportunity to perceive alternatives, the development of the Badase arrangement was a local initiative. The agreement between users was apparently stimulated by the then *Pradhan Pancha.* It also appears that the Pradhan Pancha dominated the operations of the committee.

During this period users could cut dry branches, grass and fodder, but had to have approval from the *Pradhan Pancha* to cut trees for timber. The cutting of green grass was prohibited for several months from *Asadh* to *Bhadra* (roughly coinciding with mid-June to mid-September). Particularly interesting was the rule that only "old people" were allowed to cut grass. Children were not allowed to do so for the explicitly expressed reason that they are careless and may destroy tree seedlings by mistake.

The condition of the forests bears out the effectiveness of the rules. Although there are few large trees, there is healthy regeneration. As far as illicit use by people outside the user group is concerned, one informant stated that, if they came, their *dokos* (wicker baskets) would be destroyed. However, he said, they *"don't come"*. Other informants, however, said that the Ganesthan forest is used by outsiders, from Jalbire (across the river) for much of the year. This does not occur during the monsoon because the only access is by means of a bridge some distance downstream. Minor offenses by people in the user group were relatively rare and were handled internally. However, the ultimate resort was to report offenders to the Forest Department Range Office at Jalbire. The ex-*Pradhan Pancha* did so on a number of occasions.

There are two accounts of the breakdown of the organisation. One relates to the role of the ex-Pradhan Pancha who is said to have been biased in giving permission for tree-cutting. In addition to dicriminating towards his supporters and against others (by not giving permission) he allegedly filed complaints against those who were not his supporters. In 1986 he allegedly gave permission for several people to cut down trees, then reported them to the Department of Forest. By 1986 the users had stopped supporting him and no longer contributed to the payment of forest watchers. He was voted out of office in the 1987 panchayat election. In his place a young man, who he had (allegedly unfairly) reported to the DFO, was elected.

There are a number of interesting points about this situation. Firstly, the ex-Pradhan Pancha, in giving permission to anybody to cut trees at all, was acting extra- legally. From the point of view of the Department of Forest he had no authority to do so. The fact that, while acting extra-legally in some cases, he then used the forest legislation as a sanction for misuse of forests, at first sight suggests that there were no effective local sanctions. On the other hand the actual use of filed complaints suggests that they were used more as a political weapon than as acceptable sanctions. Secondly, while the role of this strong leader in establishing and maintaining a system which worked for several years, is very evident, it is clear that the system could not survive a major conflict.

The second explanation given for the discontinuation of the *manapathi* system is the appointment of an NAFP-funded watcher to protect a piece of plantation forest near Ganeshtan. At this point the monthly collection of money ceased because alternative funding was provided. According to an old *Sarki* women who lives in a small settlement only a few minutes walk from Ganeshtan, the appointment of the externally-funded forest watcher led to a change of perceptions. Previously the people in the *Sarki* settlement used to guard the forest themselves, not leaving things entirely up to the forest watcher. Now they no longer see it as their responsibility to guard the forests.

Stage 4: 1986-1987. Although the formal system effectively collapsed in 1986, efforts to revive it were made in 1987. A new committee was set up and a new collection was proposed. This had not progressed very far at the time of the second OMRD field visit in November 1987.

Nevertheless, despite the reduced sense of responsibility mentioned above, there remained a strong consensus that the forests should be protected and used sensibly. Despite some illicit cutting, sometimes openly admitted, the rules of forest use remain strongly held norms of behaviour.

Case 3: Mahankal Ban, Thulo Siru Bari Panchayat, Sindhu Palchok District

Note: This case was originally identified during a field visit done as part of the OMRD study, although it was outside the focus settlement in Thulo Siru Bari. The information contained below is an edited and abridged extract from a separate field report (Fisher and Singh 1988).

Mahankal Ban is an area of natural forest situated on a north-facing slope. The area is approximately 14 hectares (Carter 1987). Much of the area consists of reclaimed terraces. There are some large broadleaf trees and there is thick regeneration. The forest is extremely well protected. In fact there is little or no evidence of cutting of green wood, whereas there is great potential for utilisation.

According to local informants the forest was in relatively poor condition in 2018 B.S. (1961). At this time there were rumours of an impending earthquake and the remaining forest was badly damaged as trees were cut to make temporary huts. In 2020 (1963) protection was started, apparently on an informal basis (i.e. without an organisational structure). The process apparently involved development of consensus amongst the members of the primary user group from Archale village. There were some objections from people from other villages, but these were resolved when these secondary users were told they would get equal benefits. (It should be noted that this somewhat idealised account comes from one of the leaders of the primary user group, and is open to considerable doubt.)

Between 2028 (1971) and 2030 (1973), a committee was started. There were 15 or 16 members. An unconfirmed claim was made by one of the leaders of the user group, that he was a major mover behind setting up the committee. Some people from outside the primary user group were included on the committee.

For about two years (c.1977-78) a forest watcher was employed locally. He was paid Rs 60 a month from money collected from user households. The rate varied, depending on wealth, from one to five rupees per household). In about 1979 the same forest watcher was employed by NAFP to look after a small patch of plantation in Ward No 6 but adjacent to Mahankal Ban. He retained responsibility for the natural forest. The forest watcher continues under NAFP employment, at a current salary of Rs 360 per month. The committee lapsed (in 1979) when the forest watcher was employed by NAFP.

The effectiveness of protection in Mahankal is clear evidence that the "protection ethic", which underlay the earlier indigenous organisation, has outlived the decline of the formal committee. As the presence of a committee is often seen as the essential (often the only) sign of the existence of local management systems, this is an important observation. **It demonstrates clearly that it is the presence of institutionalised rules, values and behaviour, that is the essential feature of systems of resource management, not the presence of a committee or other formal structure.**

The users of Mahankal Ban fall into two categories. The primary users are the residents of Archale village. This user group consists of 60 households of *Dulal Brahmins* and *Dulal Chettris*. There are no other castes or clans present. Secondary use-rights are more or less available to anyone, although not many people come from outside any more. The secondary users fall into two sub-groups. The first sub- group consists of people from other villages, who live seasonally in *goths* (temporary shelters) near the forest. The second sub-group consists of any other outsiders who wish to use the forest within the rules. The two other villages in Ward No. 5 (Bhul Bhule, 33 households of *Tamangs* and Thanda *Gaon*, 20 households of mixed *Brahmin* and *Chettri* castes) have no rights separate from those of other secondary users. Use-rights are as follows:

1. Primary users are allowed to collect grass and dry wood from the ground. (They are not allowed to cut green timber or even dry branches still attached to trees.) They are able to collect the fruit of the *Katus* trees when it appears (every two years). This represents a considerable source of income (an estimated Rs 15,000 in 1987).

2. Secondary users living in *goths* have the same rights as primary users during their period of residence in *goths*. When living in their normal residences they are not entitled to collect firewood.

3. Other secondary users are also entitled to collect grass and *Katus* fruit, but are never entitled to collect firewood.

4. Grazing is free, but the number of livestock is small because fodder species are not readily available.

Secondary users have no rights in decision making. According to the Ward Chairman, who is a leader of the primary users, they regard their rights as being at the discretion of the primary users. This is in need of confirmation.

The present system of management of Mahankal Ban concentrates on protection rather than utilisation. No cutting of green products is permitted, and little or none occurs. Despite this, village leaders show suprisingly little interest in increased utilisation. Part of the explanation for this may be a fear that a change from protection to utilisation may take the lid off effective control, leading to an open-access situation. However, it is likely that the main reason for the emphasis on protection lies in the structure of the user group.

The population of Archale village consists entirely of *Dulal Brahmins* and *Dulal Chettris*. Within the *Dulal Brahmins* there is a dominant group of relatively wealthy people, including the Ward Chairman and another man who is a key figure in the management of Mahankal Ban. The latter's paternal grandfather was a *Mukhiya* for the area during the Rana period.

There are strong indications that this group has enforced protection despite the needs of poorer villagers for enhanced access to forest products. The members of the dominant group have private land from which they are able to obtain forest products. Further, limiting access to forest products makes it easier for them to command cheap labour. They can do this by providing forest products from their own land in exchange for labour.

Despite the apparent fact that decision-making is dominated by a small group, it is clear that the poorer villages go along with the decisions made. This seems to fly in the face of the argument (Fisher 1988a) that consensus seems to be necessary in effective indigenous forest management. If there is no willing consensus, then at least there must be some way of enforcing reluctant consent. How can the local leaders impose their will upon others in forest management?

It doesn't explain anything to say that they are "traditional leaders". All that does is to take the question back one step: how can "traditional leaders" assert their legitimacy? There are three ways in which the local elite can impose its will:

1. As they are comparatively rich they place others in debt either by providing loans or small gifts.

2. They act as brokers (intermediaries) between villagers and officials/project people etc. To the extent that changes or "*bikas*" come to the village, it is credited to their power to influence outsiders.

3. Because they are land-wealthy they provide labour opportunities. Employment is implicitly conditional upon adherence to their wishes.

Case 4: Banechaap, Ward No 4, Badase Panchayat

In this fairly weak system the users (who come from various parts of three different wards) report offences against locally agreed practices to the Range Office. There is no formal committee or structure.

Case 5: Harre Ko Ban, Ward No 6, Badase Panchayat

Again the arrangement is informal. Users are from Ward 6, although people from Wards 8 and 9 may also collect leaves. As in Case 4, offences are reported to the Department of Forest. However, in the case of offenders from other wards, the products are seized. Construction timber can be taken on the basis of mutual consent.

Case 6: Padhyeroko Ban, Ward No 1, Mahadebtar Panchayat Kabhre Palanchok District

Padhyeroko Ban is a small forest (perhaps a little less than one quarter of a hectare) situated near the village of Mahadebtar. An irrigation canal runs through the forest and there are two wells cut into rock. The forest is dedicated to *Nag-puja* (worship of the snake god) and some people claim to have seen the *Nag* near the wells. Once a year, before the maize-harvesting season, the Newar residents of Mahadebtar worship the *Nag*.

The forest consists mainly of large and very old trees. There is little sign of regeneration and there are no intermediate size trees. In the past the collection of dry branches and leaves was permitted. However, a recent meeting decided to ban this. No cutting, pruning, livestock grazing or collection of dry leaves are permitted now. This change was made explicitly to allow small trees to grow. The extent to which this new regulation works remains to be seen.

No formal committee exists for the management of this forest. Whenever specific issues arise (such as the question of what to do with timber from a fallen tree) meetings are called by interested parties. The *Upa-Pradhan Pancha*, a *Newar* resident in Mahadebtar village, seems to be prominent in this respect. There was no evidence of any dispute about the forest.

The trees are seen as belonging to the community. To the extent that they are used, this is for religious activities or for some project of communal benefit. For example a fallen tree seen in the first visit was cut up and sold for firewood to people within the ward. The money collected (nearly Rs 300) is intended for use for the Mahadeb Temple (Case 7).

The informality of this arrangement is significant. There is an obvious consensus that trees should be protected and this consensus has lead to effective protection of large trees, which are certainly a valuable resource. The emphasis on protection and very limited utilisation of these trees is fairly typical of religious forests. The poor condition of the forest, in terms of regeneration, is also typical.

Case 7: Jogeswor Mahadeb Mandir Forest, Ward No 1, Mahadebtar Panchayat, Kabhre Palanchok District.

The Mahadebtar Forest is a fairly small patch of forest, again about a quarter of a hectare in area. A rather run-down Newar temple, the Jogeswor Mahadeb Mandir is in the upper part of the forest and adjoins a school on the edge of the village. The plot is quite steep. The forest is *guthi* land dedicated to the temple, or is, at least, locally regarded as being so. The area was effectively a wasteland until the villagers decided to plant seedlings and to turn it back into a forest. In 1981, under the leadership of a young *Newar*, who was elected *Upa-Pradhan Pancha* in 1987 (also referred to in Case 6), 1300 seedlings were carried from Budol nursery. This represents a round trip of about 2-3 days. All capable *Newar* households contributed one person for this work.

Livestock grazing and the cutting of leaves and branches are not allowed at present. No decision has been made about the long-term utilisation of the forest.

The trees planted in 1981 are now in good condition, although some trees adjacent to fields have been damaged by cutting. This may have been done by field owners anxious to avoid decrease of crop yield due to shade from trees.

The conflict due to this does not involve conflict within the group of *Newari* adherents to the temple, as the fields are owned by *Tamangs*.

As in Case 6 there is no formal committee. Meetings are called on an ad hoc basis when issues arise. While the forests are distinct the two forests are essentially the concern of an identical interest group.

The situation is similar to that in Case 6 in terms of the consensus-basis of protection and the lack of formal organisation. In both these cases the decisions of the interested group are apparently readily adhered to by others within the group. A major difference, however, may lie in the extent to which the consensus extends beyond gross protection in each case. In Case 6 the protection of old trees has gone on for many years (some informants say 60 or 70 years), but concern with the overall health of the forest (in terms of regeneration) has been limited. Only very recently has there been a decision (as yet untested) to protect seedlings. In Case 7 the the consensus led to an active decision not just to protect existing trees, but to plant and protect new one.

The very limited concern with protection of big trees only in Case 6 is probably fairly typical of management of religious forests. We suggest that it is probable that the active enthusiasm for the Mahadeb Forest (Case 7) will not continue unless the current protection is later extended to allow some utilisation of forest products.

Case 8: Hokase Bazaar,[1]. Hokase Panchayat, Kabhre Palanchok District.

This locally protected "forest" is in Ward No. 6 of Hokase Panchayat, near the village of Hokase *Bazaar*. The village is situated just below a ridge, at the other end of which is the well known temple of Palanchok Bagwati. The forest area is located a few minutes walk from the village on the side of the ridge.

The forest consists of scattered shrubland intermingled with a plantation one year old. Planting was carried out by local people on their own initiative. The land is private. The current owner apparently wishes to sell it, but those involved in the forest user group are resisting and are attempting to have the land declared to be government forest.

Just below this forest area, more or less on the valley floor, is a patch of government plantation, which is effectively treated as a part of the protected area. There is a project-employed forest watcher for the area, but he apparently never visits his area of responsibility and villagers say they don't even know who he is.

About 1981 or 1982 the people in Hokase Bazzar (a population mostly of *Brahmins)* set up a system of protection for the private shrubland. There is a committee, all nine members of which are Brahmins. Each household pays two *pathis* of maize (or the equivalent in cash) once a year. About 40 households contribute and the resulting 80 *pathis* are divided between the two forest watchers. The user group consists of those who contribute to the collection. Contributing households are entitled to collect leaf litter and grass from the forest every Sunday, although no cutting of green wood is allowed. The collection is carried out under the supervision of a forest watcher.

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1. Because of the apparent fragility of this local organisation detailed study was not carried out and Hokase Bazaar was not included in the full OMRD study.

Although people from the separate Tamang settlement in the ward are entitled to participate, none apparently do so. There are separate patches of fairly extensive and unprotected forest closer to that settlement so non- involvement in the protected patch is not surprising.

The fact that this is a new system, in the process of consolidation, makes it particularly interesting. Concern about shortage of forest products clearly stimulated action. While there is little information about the beginnings of the system, no prominent leader seems to have been involved. The current *Pradhan Pancha* (a *Tamang*) is not actively involved. Nor is the ward president, although he pays his annual two *pathis* contribution.

The fragility of indigenous forest management systems was particularly evident from this case. During a brief visit to Hokase Bazaar to make a preliminary examination of the system, the field investigators told a local guide (who is a user) of the purpose of the visit. The guide was very pleased, interpreting this as evidence that the government would start to pay for the forest watcher. In other words the local system may have developed only because the government (and NAFP) were not seen as being able to provide a solution to the perceived need for protection, not because people particularly wanted to do it themselves.

BIBLIOGRAPHY

ACHARYA, Harihar Prasad. *Management of Forest Resources in Nepal: A Case Study of Madan Pokhara Village Panchayat*. Thesis for Master of Professional Studies, Cornell University, 1984.

ANON. *Nepal District Profile: Population*. Kathmandu: Nepal Research Associates, 1987.

CAMPBELL, R. G. and MAHAT, T.B.S. *A Practical Approach to the Development of Community Forestry in Nepal*. Occasional Paper. Kathmandu: NAFP, 1977.

CARTER, Andrew. Report to Chaubas Panchayat: Nov. 1987. Unpublished report. NAFP, 1987a. Trek Report on Tulosirubari, Sindhu Palchok, 13-16 October 1987. Unpublished report. NAFP, 1987b.

DANI, Anis A. & CAMPBELL, Gabriel J. *Sustaining Upland Resources: People's Participation in Watershed management*, Occasional Paper No. 3. Kathmandu: ICIMOD, 1986.

FISHER, R.J. *The Future Role of Forest Watchers in Forest Management*, Discussion Paper. Kathmandu: NAFP, 1987.

_____. *The Ecology of Doubt: An Anthropological Study of Agrarian Systems in Western Rajasthan*. Ph.D. Thesis, University of Sydney, 1988.

FISHER, R. J. and MALLA, Y. B. *Forestry Work in Villages: A Guide for Field Workers*. NAFP Technical Note 3/87, 1987.

FISHER, R. J. and SINGH, Hukum bahadur. Thulo Siru Bari Panchayat, With Particular Reference to Mahankal Ban. 10-12 December 1988. Unpublished report. NAFP, 1988.

FURER-HAIMENDORF, Christoph, VON. *Himalayan Traders: Life in Highland Nepal*. London: John Murray, 1975.

GAUTAM, K.H. Legal Authority of Forest User Groups. *Banko Janakari* 1(4), 1987.

GILMOUR, D.A. *Reflections on Resource Availability and Local Institutions*. Discussion Paper. Kathmandu: NAFP, 1987.

HOBLEY, Mary. *Involving the Poor in Forest Management: Can It Be Done? The Nepal-Australia Project Experience*. ODI Social forestry Network Paper 5c. Place: 001, 1987.

JACKSON, Bill. Field Report: Daraune Pokhari Panchayat, Kabhre District. 1st to 9th December 1987. Unpublished report, NAFP, 1987.

JODHA, N. S. Population Growth and the Decline of Common Property Resources in Rajasthan, India. *Population and Development Review*, 11(2): 247-264, 1985.

KARMACHARYA, Sharad C. and FISHER, R.J. Forest Watchers in Community Forestry.

Banko Janakari, 1(1): 88-92, 1987.

MAHAT, Tej Bahadur Singh. *Human Impact on Forests in the Middle Hills of Nepal.* Ph.D Dissertation. Canberra, Australian National University, 1985.

MAHAT, T.B.S., GRIFFIN D.M., and SHEPHERD, K.R. Human Impact on Some Forests in the Middle Hills of Nepal, Part 1: Forestry in the Context of the Traditional Resources of the State. *Mountain Research and Development*, Vol 6(3), 1986a.

Human Impact on Some Forests in the Middle Hills of Nepal, Part 2: Some Major Impacts Before 1950 on the Forests of Sindhu Palchok and Kabhre Palanchok. *Mountain Research and Development*, Vol 6(4), 1986b.

Human Impact on Some Forests in the Middle Hills of Nepal, Part 4: A Detailed Study in Southeast Sindhu Palchok and Northeast kabhre Palanchok. *Mountain Research and Development* Vol 7 (2), 1987.

POUDYAL, B.R., KING, G.C., and MALLA, Y.B. The Development of Improved Local Forest Management in Kabhre Palanchok Dirstict. *Banko Janakari* 1(4): 16-19, 1987.

REGMI, Mahesh Chandra. *Land Tenure and Taxation in Nepal.* (2nd edition). Kathmandu: Ratna Pustak Bhandar, 1978.

UPHOFF, Norman. *Local Institutional Development: An Analytic Sourcebook With Cases.* West Hartford, Connecticut: Kumarian Press, 1986.

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