INDIGENOUS FOREST MANAGEMENT SYSTEMS
IN
THE HILLS OF NEPAL

By

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This thesis is my own work except where acknowledged.

\[\text{Signature of K. H. Gautam}\]

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ABSTRACT

The context of this thesis is the emphasis now given by HMG to management systems which will ensure the long-term sustainability of Nepal's forest resources, and its recent policy of placing the ownership and primary responsibility of managing those resources in the hands of the local people who depend on them.

The thesis points to the importance of the historical perspective and of maintaining continuity between traditional practices and present-day situations in achieving these goals.

The history of forest management in Nepal is sketched. It reveals that each of the four important geographical regions of the country - the Kathmandu valley and its environs, the Mahabharat, the rest of the hills, and the Tarai - developed different management models, but that the forests of the hills were always regarded as forests for the local people, whereas those in the three other regions were exploited or used in the interests of the ruling elites. The forest management systems in the hills region were based on local initiatives and were based on indigenous knowledge.

The primary sources of historical information were documents such as inscriptions, orders, petitions, legislation, reports etc. and verbal accounts from local people connected with forest management; secondary sources included literature on the subject.

Field work was carried out in three selected areas in the hills. Forests very different in type, origin, management history and present status and conditions were revealed. The condition varied from severely degraded (Sallepakha) to improved (Kamang) and stable (Betini).
The field work led to the conclusions that management efforts should be directed towards achieving stable forests and that the best basis of such efforts would be protective management by local users and their own institutions. However, outside support would be necessary if severely degraded forests like Sallepakha were to be brought to a state of stability.

Outside support would be largely the responsibility of the forestry authority of the country, but would need to be sensitive to the total needs of local people, and not limited to maximising tree growth; to be readily absorbed without becoming burdensome; and to be conceived in collaboration with local people and not imposed from above. The forestry profession would need to change from being part of the bureaucratic machine to being a technical arm supporting local institutions.
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LIST OF ABBREVIATIONS

ANU Australian National University
DFO Divisional /District Forest Officer
HMG His Majesty's Government of Nepal
IHDP Integrated Hill Development Project
RRS Regmi Research Series
Rs Nepali rupees
SATA Swiss Association for Technical Assistance
SDC/N Swiss Development Cooperation, Nepal
1. INTRODUCTION

1.1 GENERAL

In the distant past, the hills of Nepal must have been covered with dense forest but what now remains is a small remnant (Bhandari, 1974). The pressures which led to this deforestation are still not entirely agreed upon but they were undoubtedly complex and of many types. Griffin et al. (1988) have summarised the evidence that deforestation had multiple causes and was largely accomplished, to the extent that it has occurred in the hill region, by early this century. Certainly there is little factual support for any belief that deforestation has proceeded rapidly in the hills in recent times (HMG, 1983). Forest degradation, however, is undoubtedly proceeding as demand for many products exceeds supply in conveniently located forests.

The Master Plan for the Forestry Sector (HMG, 1988) describes the heavy pressure on forests thus:

Heavy pressure is being exerted on the forests of Nepal by the increasing population. The people depend on them for fuelwood, as well as for construction timber and other forest products. They also use them for grazing and fodder collection to maintain a large number of livestock, which are essential for supplying manure for agricultural crops. As a result of this pressure, the forests have been reduced in area and depleted of trees. In turn, it has become increasingly difficult for the people to meet their basic needs for forest products. Pressure on the remaining forests is further intensified, creating a vicious cycle and aggravating the already serious problems of environmental deterioration and declining farm yields on the scarce agricultural land.

In response to the deteriorating forestry situation, HMG Nepal is moving increasingly towards transferring responsibility for the hill forests to their users, with the role of the Department of Forests becoming more that of an extension service and less that of an enforcement agency. If user-group forest management (probably better thought of as operational schemes under the responsibility of user groups) is to occur, then an understanding of the modes of management which have occurred historically may well be of value. It may be possible to build upon, or transform, existing or past practices rather than creating all anew.

In such context, foresters (particularly Nepalese) would be better equipped to deal with their future if they had a better understanding of their past (Leslie, 1987). A look into the historical development of forestry and the insights to be gained therefrom can be a substantial aid in understanding
forest and environmental policy efforts in general (Niesslein, 1983). Not only can they help in formulating future programmes but also in their absence it is impossible to establish a soundly based forest policy for a country or to produce an adequate appraisal of any assistance project (Mahat et al., 1986). The situation, thus, suggests to search the historical record, as it alone provides the means of studying the processes of change and of testing policy proposals against the reality of practice (Dargavel, 1988). The intent of my research is to further elucidate the historical context of forestry in the Nepalese hills.

Although the historical record is crucial, there are major difficulties in tracing it, particularly in the context of the countries like Nepal. This is because much change occurred in Asia, Africa and Latin America before the regular keeping of written records commenced and because even during colonial times the records are often scanty or inaccurate (Mahat et al., 1986).

Mahat (1985) pioneered research into the forest history of Nepal. His vision or general picture of Nepal is based on those aspects that have any bearing in the widest sense on forest. In this regard he has based himself on secondary sources of information. In "An economic history of Nepal, 1846-1901", Regmi (1988) dismissed the forestry of the hills by saying "transport facilities and proximity to the Indian market made the commercial exploitation of forests viable only in the Tarai." Studies based on primary sources have not so far been made. Furthermore, forest history is not yet seen in its own perspective.

Some studies (Arnold and Campbell, 1985; Campbell and Bhattarai, 1982; Campbell et al., 1987) have encountered the systems for protecting the local forests. Molnar (1981) made a comprehensive attempt to analyse indigenous systems of forest management in terms of the features that made them successful. Fisher (1989), Fisher et al. (1989) and Gilmour and Fisher (1991) attempted to analyse some of the features of indigenous systems of common property forest management and their relevancy to forest management policy. They confined themselves, however, to very recent systems of forest management.

Thus, there are not enough studies made to conclude anything on the past systems of forest management. No efforts have been made to explore the origin and evolution of local practices of forest management, and to analyse their linkage with policy level decisions and guide-lines.
The aims of my research have been to:

(a) bring together as much documentary evidence as possible on the regulation and characteristics of forest use in historic times;

(b) undertake a partial analysis of documents within the limits of time available;

(c) undertake three case studies of specific areas in the hills region, to illustrate the links between present-day situations and the historical background; and

(d) consider briefly the implications of my findings for the current situation.

My thesis falls into two main parts. After this Introduction (chapter 1), there is a review (chapter 2) of the evidence concerning forest management in Nepal over the past two centuries, with emphasis on the period before 1957 (the year of the first development plan and the introduction of the first forestry legislation under the influence of international organisations). For chapter 2, the sources of information are mainly primary, such as legislation, petitions, and orders issued by different individuals and authorities. Then, there are three specific case studies (chapters 4, 5 and 6), and discussions (chapter 7), concerning areas where it is possible to link present-day situations to aspects of historical background. Methodology of the field work is described in chapter 3. Some suggestions for the future form a conclusion (chapter 8).

Glossaries for Nepalese words and terms and local names of botanic species used in the thesis are listed immediately after chapter 8. Photographs are presented in the respective chapters.

Appendices are presented immediately after the bibliographic references. Original documents, presented in most of these appendices, are often written in an archaic form of Devanagari script and this sometimes presents problems for translations. The documents of Appendix XVII come from the Regmi Research Series (RRS) and the translations are those of Regmi Research (Private) Limited. For the rest, I have made the translations myself. However, copies of the original documents relating to the Appendices I, II, V, VI and IX are also presented under the respective appendices.

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1 See FAO (1950), Robbe (1954) and Willan (1967)
Throughout the thesis most of the dates given are in Christian calendar. Wherever it is otherwise, it is indicated.

In the text, documents listed in Appendix XVII are indicated by 'D' followed by a number or numbers, e.g. D31 refers to document 31 of Appendix XVII.

1.2 FOREST MANAGEMENT IN NEPAL

Forest management, as now understood by the forestry profession, is a relatively new activity, scarcely extending beyond 100 years in most countries. In this sense it is highly quantitative, based on scientific and economic principles and with clearly defined goals. If the attempt is made to look back into the history of 'forestry' in a country, evidence of such forest management will inevitably be difficult to find except in recent times. However, even in recent times forest management has been changing with time and situation. The following two cases show how one important aspect of forest management has evolved within a period of eight and half decades.

On the conflict between the local people and a director of the first professional forestry school in the United States (the New York State College of Forestry) regarding the implementation of a forest plan in 1903, Professor Schwappach of Eberswalde (the forestry school near Berlin) wrote (Duerr, 1975):

To us Europeans it is entirely unintelligible that a committee of laymen, who have never seen a managed forest, should be able to pronounce competent judgment regarding the procedures of professional men. This is the shady side of the much-praised democratic system!

The European forestry heritage, then, was sharply focused upon trees, upon timber and included a belief that the answers to forest management questions, biological and engineering questions, were to be found in the forest itself (Duerr, 1975). People as individuals or as forest-associated groups were subordinated to the wider, economic aims of the forest policy.

On the other hand, (Griffin, 1988), with the perspective of work in forest management in a developing country over a decade writes:

The people are not so much part of a problem as part of a solution, as has been said before. ... People are the one indispensable part of the framework for any action. ... All the species trial plots and paired watershed catchments in the world will accomplish little unless peasants are not just taken into account but are an intrinsic part of the action.
Nepal is an extreme instance, in that forestry as an activity associated with a cadre of persons educated to professional standards has been a very recent development. It was only in the mid-1920s that a professional forester from the Imperial (Indian) Forest Service first came as an adviser to the government of Nepal. In 1941, Mr. E. A. Smythies was appointed as adviser and he assisted in establishing a Forest Department in 1942. The first Nepalese student attended the Indian Forest College at Dehradun, India in the 1940s. Since then the role of professional foresters in Nepal has steadily increased, but even now the concepts of scientific, quantitative forest management have not been implemented in Nepal.

The production of the First Five-year Development Plan by HMG Nepal in 1957 is the clearest evidence of the impact of international thought on Nepalese policy, and since that date Nepal has been increasingly influenced by world trends in economics and in development theory and practice. Before 1957, Nepalese policy, and especially forest policy, was dominated by concerns and attitudes arising from within the country itself, and the years before 1957 therefore provide the best evidence of forest policy and management indigenous to Nepal.

However the word 'indigenous' is given such broad meaning these days (Fisher, 1989; Fisher, 1988; Fisher et al., 1989; Gautam 1988b; Gautam, 1988c; Gilmour, 1990; Gilmour and Fisher, 1991; Griffin, 1988; Gurung, 1988; Rusten, 1989; Messerschmidt, 1990; Tamang, 1990) that its use without further explanation could lead to confusion. I take an indigenous system to mean one that has evolved within a country without inputs from other countries by way of imposition, inducement or extension. In particular it would have evolved in parallel with Western forestry. I thus categorised as indigenous the systems which evolved in Nepal during the time before Western interference arrived and I distinguish them from the systems now evolving as result of seminars, workshops, meetings, plantation activities, training, extension etc. The systems thus evolved indigenously are practices accepted from the past. I therefore argue that all the systems of the hills region, practised before 1957, are indigenous. Sometimes such practices were imposed from the centre, but I would still view them as indigenous provided they were responses to local (village or village group) requests or initiatives and were not significantly affected by foreign influences.
1.3 CHRONOLOGY OF NEPAL'S HISTORY

When considering the course of events related to forestry in Nepal it is convenient and helpful to adopt the chronological periods of the country's general history (James, 1981). The description of aspects of forest management in Nepal in chapter 2 is often in chronological sequence and it is therefore useful to describe briefly the historical periods involved.

1.3.1 Pre-unification

It is difficult to state exactly the year of unification of Nepal. Many authors (e.g. Regmi, 1972; Mahat et al., 1986; Hobley, 1990) have set it as 1768-69, when the Gorkhali ruler, Prithvi Narayan Shah, subjugated the kingdom of Kathmandu in 1768 and moved his capital to Kathmandu in 1769, but the process of unification was still not complete even at the end of the 18th century. The shape and size of present-day Nepal was finalised only in 1857-58 (Kumar, 1967). The unification process actually got under way in 1744 (Regmi, 1972; Mahat, 1985; Mahat et al., 1986), so the period before 1744 can be taken as pre-unification. In this early period, the territory of present-day Nepal was divided into many principalities. They were mainly grouped in three areas: Kathmandu valley, the western hills and the eastern hills. Makawanpur was the only kingdom in the Tarai; it lay to the south of Kathmandu and consisted of modern Bara, Parsa and Rautahat districts.

Kathmandu valley

The Kathmandu valley only was considered as Nepal before the conquest by the Gorkhali ruler in 1768 (Kumar, 1967). Though its earliest history is unknown, the Lichchhavi period (probably 3rd to 11th century) has been recognised as the beginning of the evolution of present civilization in Nepal (Rose and Scholz, 1980). The Malla dynasty followed the Lichchhavi dynasty in the 11th century. The Kathmandu valley was a single kingdom until 1457, when it was divided into three kingdoms, Kathmandu, Bhadgaun and Patan, by the three sons of Yaksha Malla (Kumar, 1967). Though there were occasional unifications and separations in succeeding times, there were three states at the time of annexation by the Gorkhali ruler in 1768.

The territory controlled by these three Kathmandu valley states appears to have extended between the Trishuli river in the west, the

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1 The unification process undertaken by Prithvi Narayan Shah is considered here. Earlier kings of Gorkha had already initiated this process but had little success.
Tamakosi in the east, the Kuti pass in the north and the Mahabharat *lek* in the south, although there is some uncertainty about the eastern boundary.

**Western hills**

In the hills region in the west, i.e. between the Trishuli and Mahakali rivers, there were two sets of states known by their numbers as *chaubise* (group of twenty-four) and *baise* (group of twenty-two) (Kumar, 1967). These were based on two river catchments, the states in the Gandaki region being under the *chaubise* and those in the Karnali region under the *baise*. Only a few of these states had territories in the Tarai or the inner Tarai, in the present districts of Kapilbastu, Rupandehi, Nawalparasi, Banke, Bardiya, Kailali and Kanchanpur (Regmi, 1972).

**Eastern hills**

Chaubandi and Vijayapur were two kingdoms in the eastern hills (Regmi, 1972). The territory of Chaubandi kingdom included Okhaldhunga and Bhojpur in the hills and Saptari, Siraha, Dhanusha and Mahotari in the Tarai. Vijayapur consisted of the present hill districts of Dhankuta, Panchthar, Taplejung, Ilam, Terathum and Sankhuwasava, and of Morang, Sunsari and Jhapa in the Tarai.

**1.3.2 Unification to pre-Rana period**

This period covers the expansion and adjustment of the territory of Nepal. As the Gorkhali ruler became successful in attaining the unification in various stages, it will be appropriate to explain these.

1. At the time Prithvi Narayan Shah became the King of Gorkha in 1742 (Regmi, 1975; Stiller, 1968; Kumar, 1967), his territory was between the Himalaya in the north, Seti river in the south, Marsyangdi in the west and Trishuli in the east.

2. After the Gorkhali conquest of the Kathmandu valley, the capital was moved to Kathmandu in 1769 and the territory of Nepal lay between the Marsyangdi in the west, the Tamakosi in the east, Tibet in the north and India in the south.

3. In 1775, when Prithvi Narayan Shah died, the kingdom of Nepal included the whole of the eastern Tarai (Morang, Sunsari, Jhapa, Saptari, Siraha, Sarlahi, Mahotari, Dhanusha, Bara, Parsa, and Rautahat), the eastern and central inner Tarai (Sindhuli, Udayapur,
Chisapani, and Makawanpur), the Kathmandu valley, the eastern hills region up to the Tista river bordering Sikkim, and a small part of the western hills region (Nuwakot, Dhading, Gorkha, and Jajarkot) (Regmi, 1972).

4. Between the death of Prithvi Narayan Shah and the end of the 18th century, all the baise and chaubise states except Palpa were subjugated and the western boundary was extended beyond the Mahakali river (Kumar, 1967).

5. By 1803, the territory of Nepal extended from the border of Kashmir to the heart of Sikkim (Kumar, 1967). Palpa, the last of the independent chaubise states, was annexed in 1804 (ibid.).

6. The ambition of the Gorkhali rulers was not curtailed. When Bhimsen Thapa was appointed as mukhtiyar in 1806, he decided to conquer the rich and fertile plains to the south. Incursions took over several villages which were situated either in disputed territory or in the territory of British India (ibid.). This resulted in conflict and finally war between Nepal and British India in 1814.

7. The war ended with the treaty of Sugauli in 1816. After this, the territory of Nepal extended only from the Mechi river in the east to the Mahakali river in the west, including the Tarai. Some Tarai lands were lost under the treaty but later the far west Tarai districts of Banke, Bardiya, Kailali and Kanchanpur were returned to Nepal as a reward for the assistance given to the British during the Indian Mutiny of 1857-58 (Kumar, 1967; Regmi, 1988). These districts were known as naya-muluk till the end of the Rana period.

Thus the present boundaries of Nepal were established only in the middle of the 19th century, i.e. more than a century after the initiation of unification.

1.3.3 Early Rana period

The kot massacre occurred on 14 September 1846, enabling Jung Bahadur Rana to become Prime Minister of Nepal (Kumar, 1967), and initiating the Rana period of Nepalese history. This period was significant in the further unification of the country, in the sense of social and economical unification. The first legal code of the country was enacted within the first decade of this period.
The objectives of the first Rana Prime Minister were: firstly, to acquire real power by making the King politically ineffective; and secondly, if possible, to usurp the throne for himself (Kumar, 1967). Within a decade of becoming Prime Minister, Jung Bahadur was able to secure the title of maharaja and the King became a puppet of the Prime Minister. This is summed up by Sylvain Levi (Levi, 1908) in the following words:

In fact the King is only a sort of entity today, a nominal fiction, the only representative of the country recognised by the foreign powers. His red seal (lalmohar) is necessary to give an official value to diplomatic documents, but his action is void.

To secure his prime ministership from external force, Jung Bahadur attempted to improve relations with the British rulers of India. He paid a visit to Europe in 1850 with the formal object:

to see and bring back intelligence respecting the greatness and prosperity of the country, its capital, and perfection to which the social conditions have been raised there and arts and sciences have been made available to the comforts and convenience of life. (Regmi, 1988)

When the British had to face the Indian Mutiny in 1857, Jung Bahadur offered military assistance. After being successful in suppressing this rebellion, the British transferred the far western Tarai districts of Banke, Bardiya, Kailali and Kanchanpur back to Nepal in 1858. This stimulated Jung Bahadur to exploit the rich forest resources of these districts to accumulate revenue. Immediately the amanat system was introduced to manage the felling and export of timber (Regmi, 1988) from these areas. Only in the later stages was this system adopted in the eastern Tarai.

1.3.4 Late Rana period

This period starts with the beginning of the prime ministership of Chandra Shumshere Jung Bahadur Rana in 1901. The reason for breaking the Rana period into two is based on the administrative patterns. In contrast to the earlier period, the later Rana period was more people-oriented. Administrative changes were initiated through the timely amendment of laws and by-laws and decentralisation is one of the prominent features. There were different forestry laws for the Tarai and the hills, and as most of the forests in the Kathmandu valley were under birta tenure, their management was also distinct from other areas.
1.3.5 Post-Rana to pre-panchayat period

This is the period between 1951, the year when Rana rule was overthrown by the democratic movement, and 1960, the year the panchayat system was introduced. From 1951, the government worked as caretaker to maintain law and order until a multi-party democratic government was formed after the election in 1959. The elected government was suspended by the King and a partyless panchayat system was introduced in 1960.

During this period not many changes were made to the arrangements in force at the end of the Rana period (Stiller and Yadav, 1979). The first development plan, for the period of 1957-62, was prepared and implemented. Some changes were made in the forestry sector, including the nationalisation of private forests.

1.3.6 Panchayat period

The panchayat system replaced the multi-party system in 1960. During the panchayat period, six periodic development plans were implemented. A substantial amount of foreign aid was provided through international, bilateral and multilateral agencies and Nepalese policy was strongly influenced by international pressures and events.

1.3.7 The dawn of democracy

After three decades of partyless panchayat system, the dawn of democracy arrived in the 1990, when the multi-party system was restored under a constitutional monarchy. Just before the general election held in May 1991, under the new constitution, 44 political parties were registered. However, only six of these parties could remain as national parties after the reviewing their position in general election, on the basis of the criteria fixed by constitution.

1.4 GEOGRAPHY OF NEPAL

As shown in the foregoing section, the various geographical regions have had rather different histories. It will, therefore be necessary and relevant to give a brief description of the geography of the country.

Geographical division of the Kingdom of Nepal is best based on topographical features. Accordingly, the country can be divided into two major topographical zones, the plains and the hills. The plains zone is
located in the southern part and can further be divided into the Tarai\(^1\) and the inner Tarai. Similarly the hills can be divided into the Chure\(^2\), Mahabharat, middle hills and Himalaya according to their location from south to north. However, the Kathmandu valley in the middle hills has a distinct geography and history and so needs to be separated. Thus the resulting geographical regions of the country would be: Tarai, inner Tarai, Chure, Mahabharat, middle hills, Himalaya and Kathmandu valley.

The Tarai region is a long, narrow east-west strip extending right along the southern border except in Chitawan and Dang districts where the Chure touches the border. Its altitude ranges from 50 m to 200 m above mean sea level.

The inner Tarai is a series of WNW-ESE valleys between the Chure in the south and the Mahabharat in the north, with altitude up to 300 m. Udayapur in the east, Chitawan in the central part, and Dang and Surkhet in the mid-west are the valleys of significant size and importance in this region.

The Chure, the outermost foothills, runs east-west in a line roughly parallel to the Indian border. It is distinct only where the inner Tarai region is distinct. In other places it merges into the foothills of the Mahabharat. It thus separates the inner Tarai from the Tarai and its altitude goes up to 1,000 m.

The Mahabharat hills are to the north of the Chure and extend more or less continuously along the whole length of Nepal. These hills are very steep, and rise to over 3,000 m in places.

The middle hills region lies between the Mahabharat in the south and the Himalaya in the north and it is the most populated zone of the country. The history of Nepal mainly involves this region. The altitude varies from 500 m in the river valleys to over 2,000 m at the peaks. The Kathmandu valley, almost entirely surrounded by a ring of mountains is located at about 1,500 m in the central part of the middle hills.

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\(^1\) Some authors have written this as Terai. But Tarai represents more correctly the Nepali pronunciation.

\(^2\) In some of the literature, this is written as Churia. It is also called Siwalik in India. But Chure, where 'chu' sounds as in choose and 're' sounds as in red, represents the Nepali pronunciation appropriately.
The Himalaya form the northern boundary of the country, ranging from 2,000 m to 8,848 m in elevation. There are settlements in the river valleys throughout the Himalaya region.

1.5 ADMINISTRATIVE DIVISIONS OF NEPAL

At present Nepal is divided into 14 zones and 75 districts. A brief history of their origin is relevant to any study of the historical evidences relating to forestry, as the regulation of forestry is closely interwoven with the general administration of the various divisions of the country. The evolution of administrative divisions started only in the middle of the 19th century, when the shape of the present Nepal was finalised.

The Tarai was divided into eastern, western and far-western administrative districts. Chitawan was a separate administrative district and there were three other administrative units in this part of the country, based on fort-towns, or gadhis, on the main routes connecting the middle hills with the southern plains through the Mahabharat mountains: Udayapur and Sindhuli in the eastern inner Tarai, and Chisapani in the central inner Tarai (Regmi, 1988). In 1898, the Tarai was divided into 12 districts. The goswara, the head office of the district government, which was established in 1879-80 in each Tarai district, was administered by a subba or a hakim, who after 1898 became known as bada-hakim (Kumar, 1967).

Administrative districts in the middle hills were determined on the basis of the defence strategy. Districts were created in the far eastern and western part much earlier than in the central part. Dailekh, Doti, Dadeldhura, Jumla, Baitadi, Palpa, Pyuthan, Baglung, Gulmi and Salyan in the west, and Dhankuta and Ilam in the east, were each under the administrative control of a gaunda but there were no separate administrative units in other parts in the hills region. However, jangi-pareth stations were created to maintain law and order in different parts of the hills in 1879 (Kumar, 1967). The number of people involved in this force was about 13,000 in 1922 (Landon, 1928). It was not until the last year of the 19th century that Bir Shumshere divided the central part of the hills region, with the exception of the Kathmandu valley, into eight administrative districts as follows (Regmi, 1988) : East No.1 (Sindhupalchok), East No.2 (Dolakha), East No.3 (Okhaldhunga), and East No.4 (Bhojpur) in the region east of the Kathmandu valley up to the Arun river, and West No.1 (Nuwakot), West No.2 (Gorkha), West No. 3 (Bandipur) and West No.4 (Syangja). These district offices were known as goswara and functioned until
their replacement by the administrative arrangements of the *panchayat* system in 1962. Kathmandu valley, before the new arrangements, comprised the three districts of Kathmandu, Bhaktapur and Lalitpur, each under a magistrate functioning under the general supervision of a commissioner for the whole of the valley (Regmi, 1978).
2. HISTORICAL EVIDENCE CONCERNING FORESTRY IN NEPAL

2.1 CODES OF PRACTICE

2.1.1 Kinds of codes

As noted in section 1.1, it is unrealistic to look for evidence of forest management, as now understood, in past times in Nepal. Nonetheless, varied evidences of concern for the forest resource can be found extending back over centuries, and rules and exhortations concerning forest practices are numerous. These certainly do not amount to the management plans of Western forestry but are best viewed as codes of practice which, in many ways, guided the treatment and use of the forest resource, at least in nominated areas.

The codes of practice are essentially two, originated in two main ways, termed respectively self-originated and imposed (Gautam, 1987). In the first, the initiation, definition and enforcement of the codes have been local, in the sense of pertaining either to a particular group of forest users or to a local group which would obtain some environmental benefit. The imposed codes have come from two sources. Firstly there are those imposed in response to local initiatives and requests; these are prevalent in the hills region. Secondly there are those originating from the exercise of central authority and imposed for local benefit, general benefit or the benefit of a ruling elite. Until the mid-20th century, Nepal was a feudal society, and it is scarcely possible to distinguish between actions intended to provide benefits to the state as a whole and to a ruling elite. The elite formed a highly centralised government. What benefited the elite was the aim of that government and so of the state. Such centrally imposed codes are indigenous to the country unless they have foreign influences, but they can be viewed as imposed on local areas or people.

In principle, the codes identified can be categorised in terms of their origins, objectives, perceived benefits and beneficiaries, as depicted in Figure 2.1.
2.1.2 Sources of evidence for the codes

The evidence concerning these codes is both diverse and fragmentary. The various types of evidence will now be described.

(a) Inscriptions

Inscriptions are the oldest records, and in Nepal they are divided into *shilapatra, tamrapatra* and *kasthapatra*. In the context of the present study, the oldest stone inscriptions were carved during the Lichchhavi era in the Kathmandu valley. These inscriptions were installed at specific sites where their messages could be read by the people concerned.

The system of placing red flags around the boundaries of protected forests during the early Rana period (see D83) can also be regarded as a modification of the installing of inscriptions at particular sites. Similarly, the
practice devised by local people of installing *tharo* at the entry point to a forest can be seen as another stage evolved from inscription. This practice is still effective and is widely used in the hills region, to inform local people, most of whom are illiterate.

During the early Rana period, documents (e.g. D89) regarding forest protection mentioned *'kasthapatra'.* There is not sufficient reason to believe that the inscription was actually on wood; probably the term denoted a document relating to matters of wood and forests. However, document D83 mentions a *kasthapatra* installed along with red flags in the forest.

(b) Specific orders

Though specific orders were issued throughout recorded history, they only became fully institutionalised in the post-unification period\(^1\). They were intensively used until the enactment of the legal code in 1854. Most of these orders were issued as *lalmohar* by the kings. However, a few were issued as *sanad, sawal* or *khadganisan* by the prime ministers in the later Rana period even after the enactment of legal codes. The *lalmohar* were often issued in response to petitions of local people, functionaries and local authorities but when the central elite needed forest products for themselves, orders were issued with that purpose only.

(c) Petitions

After unification, petitions often linked indigenous management to the central power, and many occurred when established practices faced challenges which could not be resolved locally.

(d) Royal directives

In addition to legal codes promulgated during different post-unification periods, royal directives have played a vital role in the general administration. These sometimes referred to the management of the natural resources. Of prime importance is the *dibya-upadesh* of Prithvi Narayan Shah (Stiller, 1968). The codes later developed were based on the contents of the *dibya-upadesh*.

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\(^1\) A system of scrutinising before issuing the royal order was defined by the administrative regulations of the government of Nepal, 1793 (quoted from Regmi, 1972) as:

> Four persons shall be appointed to scrutinize royal orders to be issued in any matter. Such orders shall be issued only if they give their approval. If they do not give their approval, no order shall be issued. Once a royal order is issued, it shall be complied with. Those who violate royal orders shall be punished. If royal orders are found inadequate in content, persons scrutinizing them shall be punished.
(e) Evidence of kipat

It has been difficult to trace the origin of the *kipat* system in Nepal. *Kipat* is a system in which a specific area of land has communal ownership. Such ownership implies agreed membership and, probably, a code of practice, but written examples have not been found. Though this system existed prominently in the far eastern hills, it has been traced in some communities in districts adjoining the Kathmandu valley and Dailekh, a district in the far western hills. Attempts to abolish *kipat* as a legal category have been made since 1950 but are not yet fully successful. However, it is over-ruled by some legislation relating to the land and the forest.

(f) General regulations

The term 'regulation' has been used widely during the Rana period. Any arrangements made by the central authority were 'regulations'.

(g) Legal code

The evolution of a legal code in Nepalese history began with the code of the Shah dynasty at the time of Ram Shah (1606-33). The first legal code to cover all of present-day Nepal came only in 1854 (HMG, 1965). It was the first up-to-date treatise of law, it was made by a large body of councillors and it was intended to regulate almost all aspects of contemporary social life (Kumar, 1967). Individual chapters dealt with specific sectors. The chapter 'On cutting trees' of the code (HMG, 1965) dealt with all forestry matters. Whenever the legal code was found insufficient, amendments were made through regulations, *sanads* and *sawals*. Later, these were incorporated in the legal code. In this way the legal code of 1854 was amended in 1870, 1888, 1898, 1918, 1923, 1935 and 1948 (Tiwari, 1990) before it was replaced by a new *muluki-ain* in 1962 (HMG, 1962). However, the chapter 'On cutting trees' was repealed by the Forest Act in 1961 (HMG, 1961).

(h) Sanad

There is no evidence of a *sanad* before the enactment of the legal code in 1854. The *sanad* replaced the practice of issuing royal orders and was used for the first time in the forestry legislation in 1886, regarding the handing over of responsibility for forest protection to the local revenue functionaries (D101). After this period the *sanad* was frequently used in the authorisation of forest protection activities. Later it was used in forest legislation, in the amendment of the legal code in 1918. All the *sanads* dealing with forestry matters were repealed by the Forest Act 1961. Other documents, *rukka, khadganisan, duichhape* etc. were also issued as part of *sanad*. 
(i) Sawal

A sawal was an order /circular to the government officials in Rana times.

(j) Visitors’ reports

After unification, and particularly when the British came to India, visitors sometimes entered Nepal for varied purposes. Many entered to study various resources and the potential for their exploitation. The following wrote reports mentioning the forestry situation in Nepal:

Kirkpatrick 1793
Military personnel 1814-16
Hamilton 1819
Honoria Lawrence 1843-46
Oldfield 1850-63
Girdlestone 1876
Elles 1884

2.1.3 Usage in this thesis

For simplicity, the term ‘order’ will be used throughout this thesis to include inscriptions, specific orders, orders made in response to petitions, royal directives, general regulations, legal codes, sanads and sawals, unless it is necessary to be specific in any particular case.

2.2 CUSTOMARY INDIGENOUS RIGHTS

It is likely that indigenous codes of practice have existed throughout the hills region for centuries, but documentation is inevitably rare in a country which was largely illiterate until recent times. Local communities would also have seen no need to commit codes to writing in most cases. Documentation of the existence of customary indigenous rights has mainly occurred when they have suffered attacks by those with customary rights themselves (D74), by outsiders\(^1\) (D51, 74), by unspecified parties\(^2\) (D27, 48, 54, 55, 64, 68, 70, 71), or by local authorities (D38). However, D58 is an outcome of the controversy that occurred between groups of local people occupying land under different tenure or obligation. Similarly, D56 and 80 are the outcomes of injustices done by chitaidar and land-owners respectively in regulating customary rights. The documents D22 and of Appendix XIV are the

\(^1\) Though it is not specified where these people were from, they are believed to be from adjoining villages.

\(^2\) Among customary right holders and outsiders but not from far distant areas.
codifications of existing customary practices. Only D45 reveals initiatives developed over any long period - in this case over the years 1834-47. Thus the written evidence can represent only a very small fraction of the indigenous codes that existed.

Evidence of the existence of customary rights relating to forest use can be found in documents Appendix XIV (this instituted the customary rights to grazing land, *panighat*, and recognised the rights of subsistence farmers in forests), D48, 51, 56, 64, 70, and 74. The documents D38, 56, 58 and 80 relate to pasture, and D27, 48, and 64 relate to soil and water conservation. Document D68 deals with forest plantations established by individuals on land under *kipat* tenure. Orders made in relation to the rights usually confirmed them although in one case (D80) they were abolished.

In some documents (D9, 22, 48, 54, 64, 70, 74) there are references to practices of 'former times'. It is tempting to assume that these refer to pre-existing indigenous practices but the content (except D54, 64 and 70) also allows that the practices may have been imposed in response to local requests.

Sometimes a need was seen to institute official regulation to enforce customary practices (D70) or to replace a lost order (D37). An official edict was obviously seen as important.

**2.3 EARLY CODES AND SOME CONTINUING EMPHASES**

**2.3.1 Early codes**

The earliest known occupants of the Kathmandu valley were cow herders, followed by the Mahisapal people who reared water buffalo (Tiwari, 1990). Thus the earliest main use of forests within the Kathmandu valley was probably for the provision of pasture and fodder. However the area around Pashupatinath was maintained for deer. Tiwari (1990) mentioned that King Bir Dev created the settlement of Lalitpur by clearing the Lalit forest in the late 3rd century, indicating that that part of Kathmandu valley was then forested. Elsewhere in the hills region, the settlements were created close to the forest, making it easy to rear water buffalo. Some were later shifted because of severe attacks by leopards and other wild animals (Rana and Bajracharya, 1972). In some places, such attacks were noticed even in the late 18th century (D2).
The Lichchhavi period has been described as the golden age of decentralised administration (Tiwari, 1990), because of the existence of local peoples' organisation such as gosthi and panchali. Each member had the same responsibility and authority in forestry matters. Inscriptions from the time of Ganadev (about 340 A.D.) and Shiva Dev (middle of 5th century) speak of a law laying down the powers of village panchayats (Kumar, 1967). The taking of wood for making charcoal for subsistence purposes and for timber to build the houses of the local people was permitted. According to the Changunarayan1 inscription from the time of King Shiva Dev, up to 40 trees were allowed for building houses and for making charcoal for household purposes2 (Tiwari, 1990). The same inscription banned the use of forests for commercial purposes.

The inscription of Satungal3 village reveals that the local inhabitants were empowered to take action against those outsiders who entered forests to collect other than leaves. It also reinforced the system of allocating forest to the villages.

The regulations (D1) of King Mahendra Malla (1560-74) are dominated by the feeling that "If any subject remains hungry, penalty for the sin accruing on that day shall be borne by the thakali and mane of that tol". It was stated that as "for lamps, torches and wicks, go to the forests and use devdaru", which is concerned with the forest products to be obtained from green wood. Though it has not been possible to document fully other provisions of forest regulations of this time, forest products from dry parts of the trees were available without any restriction, as the afore-quoted order specifies the products from 'green trees'.

Queen Ganga, the wife of King Shiva Singh Malla, created a garden close to Budhanilkhantha (a religious place located in the northern part in Kathmandu valley) in around 1585 and named it 'rani ban' (Tiwari, 1990). She also expanded the Raj-rajeswori forest (to the south of Pashupatinath temple located on the banks of the Bagmati river in Kathmandu valley).

From the early 18th century forest management practices were initiated in most of the forests of the Kathmandu valley by implementing

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1 A place in the north-eastern part of Kathmandu valley, and named after the temple of Changunarayan. It is likely that the inscription was installed in the temple.
2 It is not clear about the frequency of these supplies but most probably it was permitted to collect timber at the time of building house, and for the charcoal every year. Thus the number of trees indicated could be for the former purpose only.
3 A place in the western part of Kathmandu valley.
regulations. The regulations emphasised consolidation of forest area, recognised the users, prescribed the terms and conditions for using forest produce, and set the penalties for defaulters. Management of forests of religious sites was given due emphasis by prohibiting the cutting of trees and the killing of jackals, monkeys and snakes. Lighting fires in the forests was taken as one of the serious offences (Tiwari, 1990).

Ram Shah (1606-36) introduced the first legal code (Appendix XIV) in the western hills region to regulate economic and social relations among his subjects, most of whom belonged to non-Hindu tribal communities (Regmi, 1972). This code had a tremendous impact upon surrounding areas and, according to one view, may have been an important factor in the subsequent expansion of Gorkha's dominions (Joshi and Rose, 1966).

Ram Shah's code has two major components which arise again in many later orders. The first relates to the maintenance of trees along paths so that travellers, especially porters, can relax in the shade. Later orders (D52, 65, 67) and the clauses of the legal code of 1854 have a similar emphasis, often including trees around resting places.

The second emphasises the maintenance of trees as an aspect of water management, in the belief that forest clearing leads in one way or another to loss of, or reduction in flow of, sources of water and to landslides. During the time of Prithvi Narayan Shah this belief was further supported on the ground that destruction of forest would lead to a decline in rainfall and undermine the productivity of the soil (Acharya, 1966). As the main emphasis in that period and later was to increase irrigated land¹, forests were accepted as a common significant factor in conserving water, land, irrigation canals, and ultimately, the productivity (D27, 36, 48, 50, 52, 64, 65, 67).

The code of Ram Shah also recognised the need for grazing areas (gauchar), and the indispensability of forests for subsistence households. The code encourages increase in the area of agriculture land by reclaiming waste land, allowing the cultivator to keep the whole crop for three years after reclamation. The code does not specify reclamation of forest land. The other main type of land reclaimed in the hills region was bagar, or lands once cultivated but washed away by floods or landslides. As the code specifies the payment of an owner's share of the crop from the fourth year, it seems the

¹ Prithvi Narayan Shah in his dibya-upadesh directed: "In places suitable for paddy, canals should be dug, and fields cultivated, even if it means moving a house" (Stiller, 1968). Later orders (D14, 16) have a similar emphasis.
land reclaimed was allocated land. The ninth code indicated that all land
belonged to the king. So if the reclaimable land were other than allocated,
the owner's share could have reverted to the king. But this was not the case.
So the emphasis on reclamation of land must relate to the category
mentioned before, i.e. bagar, rather than to forest. Regmi (Regmi, 1972) has,
however, distinguished forest land from waste land on the basis of a
document of 1793, indicating that forest was not included under the category
of waste land.

Though in several parts of both the eastern and the western hills
regions, a number of indigenous ethnic groups owned lands on a communal
basis without any legal title under the kipat system, the kiratis of the eastern
hills region were the biggest kipat-owning community in Nepal (Regmi,
1972). It is not known when this system was initiated, but it was certainly of
long standing before unification. Prithvi Narayan Shah did not make any
change in this traditional system of land management. Under the kipat
system, the whole land, irrespective of its use, was owned by the
community. Individuals who cultivated lands in their capacity as members
of kipat-owning ethnic groups owed allegiance primarily to the community,
not to the state (Regmi, 1972). Thus the whole land, including forests, was
being managed for the benefit of the local community. This form of
ownership persists in the local system of forest management by the Sherpa
community of Khumbu region (Führer-Haimendorf, 1964) and in the Jirel
community of Jiri (Acharya, 1989; Acharya, 1990). The kipat system itself is
evidence of local management for local benefits.

In the Tarai, the Mahotari, Rautahat, Bijayapur, and Makawanpur
principalities were together known as South Limbuwan. The kings of these
areas protected forest intensively, being afraid of invasion by neighbouring
countries (Tiwari, 1990). Francis Hamilton, a member of the first British
mission to Nepal in 1802-3, noted that the rulers of the principalities which
controlled the Tarai region, before it was conquered by Gorkha, were so
much afraid of their neighbours that they did not promote the cultivation of
this low land (Hamilton, 1819). The purpose of forests here was thus to
secure the terrain from foreign invasion.

2.3.2 Royal order emphases

The management norms established at the time of unification ceased
in Kathmandu valley immediately after the capital was moved to
Kathmandu and rather were directed towards managing for the interest of
ruling elites (see sections 2.4, 2.5.1, 2.5.3 and 2.5.4). However, the royal orders D25, 36, 37, 62 emphasised management for local needs (mostly for conservation purposes). Furthermore, the orders D30, 33 and 63 banned the reclamation of forest land.

The hills forests were seen as sources of forest products for local needs, both individual needs (D50, 51, 53, 54, 57, 64, 65, 67, 70, 84) and communal needs (D22, 43, 44, 45, 47, 50, 51, 65, 67, 70, 71). Though most of these documents show concern to conserve the local environment, sometimes forests were managed entirely for conservation of the local environment (D27, 36, 46, 52, 62, 66, 73). The system consisted of authorising a local person to regulate forest products under specified terms and conditions. The stability of the local forest was to be encouraged through protecting some specified species (D43, 47) or green trees (D52, 57). Only one royal order (D65) prohibited cutting of a particular species for nine years. None of these arrangements attracted any levies on such products.

Most of the orders issued between unification and 1842 relate to the forests west of Kathmandu and east of the Kali-Gandaki, i.e. east of Baglung. However one was found relating to pasture management in Salyan. Only in 1842 (D51), was this (practice of issuing orders) extended to the east of Kathmandu. By the middle of the 19th century, the practices laid down in such orders were applied between Baglung in the west and Okhaldhunga in the east. But one order regarding the management of an *Acacia catechu* plantation in Pallokirant (D68), shows that they may have extended up to the far eastern hills.

### 2.3.3 Legislative support

The first legal code of the country reinforced the practices laid down in previous orders with the provision of penalties for those who cut trees in areas where this was prohibited through royal or other orders, or in *guthi, birta, bekh, chhap* and other lands belonging to others. Thus it recognised the ownership of trees. Like the codes of practice established earlier, it continued to prohibit the cutting of trees along roadsides, water sources and irrigation channels even by the owner. In addition, it defined domestic and commercial use and provided different entitlements according to the tenure of the land.

Forest management principles were enforced not only through the forestry legislation but also through by other sections of the code. In this way, meadows and pasture lands were preserved from agricultural use by the
section "On reclamation of waste lands" of the legal code 1854. The cultivation of forest land adjoining inhabited areas was strictly prohibited by the regulations. Such provisions ensured the supply of forest products, including pasture for the local people. In situations where the existing laws and by-laws were insufficient, orders were issued to validate the use of forests for local needs (D78, 80, 103, 110). Though forests were often part of the land granted under birta (D104), persons deputed to collect revenue from such land were not authorised to collect revenue out of the forest products but were instructed to promote reclamation and settlement (D115).

2.3.4 Institutionalisation

Document D89 attempted to involve local functionaries in the protection of forests. The reason for this change in policy is partly expressed in D83 by an officer as "It would not be possible to protect the forest merely through the orders of the government." Although jangi-pareth were stationed in different parts of the hills region, it was simply not possible to deploy army personnel for all the forests.

After devising this policy (as indicated in D89), it was first implemented in the Kathmandu valley (D100, 101) and was extended to some birta forests of Kabhrepalanchok (D101). However the practices adopted there (D101) were not the same as those initiated by early codes and royal orders (see foregoing sections).

The ban-goswara was established before the end of 19th century, as a central level authority to manage the forests of the hill region (Tiwari, 1990). Some forest check-posts were created to stop illegal activities in the forests and to stop smuggling of forest products (Appendix I). However, the system of authorising local functionaries was retained even in the forest of birta land (Appendix II).

In 1907, the government introduced a new arrangement for providing the timber required by local people for building houses and cattle-sheds. (This is indicated in the rukkas relating to forests in various parts in the hills region). But after only four months of this arrangement a revolutionary policy was introduced to handover the management responsibility, including harvesting and utilisation of all forests, to the local people and functionaries. This was implemented first in the eastern hills (East Nos. 1, 2,

---
1 Tiwari (1990) gives this date as between 1893 and 1903. As the major administrative changes were made in 1899, the ban-goswara may have evolved as one of these changes.
3 and 4 districts) and was extended to the western hills (West Nos. 1, 2, 3 and 4 districts) in 1910 and to the rest of the hills in 1913 (see Appendix XII).

This new policy has had a significant impact on the forestry of the hills. The name \textit{sanad/sanadiya} given to many of the forests in the region is the result of this implementation. \textit{Rukkas} for various forests in Dolakha district, and forests in Kaski (Adhikari, 1990) and Dadeldhura districts (Bhattarai, 1985) reveal the application of the policy throughout the hills region. Acharya (1990) has documented the linkages of this policy with the management of forestry in the Jirel community. Whereas Fürer-Haimendorf (1964) has documented the system of forest management applied by the Sherpa community, where he has noticed the evidence of its functioning since 1941. Several authors (Fisher, 1989; Acharya, 1990) have considered the Sherpa system to have evolved in isolation, and its linkages with the afore-mentioned policy needs to be further investigated.

Documents relating to this policy recognise the organisation shown in Table 2.1. The term \textit{talukdar} has been used widely to denote any kind of local functionaries, so this organisation could apply to all forests in the hills region, irrespective of land tenure systems.

Table 2.1 Forestry organisation in the hills region in 1910

<table>
<thead>
<tr>
<th>Institution</th>
<th>Central</th>
<th>District</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muluki-adda</td>
<td>Prime Minister</td>
<td>Goswara</td>
<td>Talukadar/Raiti</td>
</tr>
<tr>
<td>Ban-goswara</td>
<td></td>
<td>Addas</td>
<td></td>
</tr>
</tbody>
</table>

| Functions             | Policy formulation | Judicial action against Execution offenders |

After implementation all over the hills region, the policy was incorporated in the legal code in 1918 through amendments under clause 5 (HMG, 1923). In a further amendment of the legal code in 1935 (HMG, 1935), this was put into clause 7, which states:

In case any person reports that he has raised a forest on a particular land under \textit{raikar} or \textit{jafati} tenure in consultation with the villagers, but that the forest has remained unprotected because of the absence of an official order, demands an official order granting him authority to raise a forest in specified areas other than those owned or cultivated by another person, and in case the inhabitants of the adjoining area are found to have expressed their consent in writing, a \textit{banpala-sanad-rukka} granting the applicant authority to raise a forest on such land and mentioning the particulars contained in such document shall be issued.
This Clause was amended in 1948 (HMG, 1952) and finally read:

In case any person reports that he has raised a forest on a particular land under raikar or jafati tenure in consultation with the villagers, but that the forest has remained unprotected because of the absence of an official order, demands an official order granting him authority to raise a forest in specified areas other than those owned or cultivated by another person; or a gaunda, goswara or forestry authority felt the necessity of protection of any forests; and in case the inhabitants of the adjoining area are found to have expressed their (in majority) consent in writing, and the forest found to be protected, issue a banpala-sanad-rukka in the name of chitaidar instructing to consult chitaidar if any local raiti-duniya needs timber and vice versa i.e. chitaidar has to consult duniya-raiti whenever he needs timber.

This legislative amendment changed the paradigm of forest management to some extent, and in addition it expressed the intention of creating new forests in the hills. It recognised local initiative and the role of all community members in the management of forest resources in the hills region. Whereas previously only villager’s action could initiate the issue of a banpala-sanad for the management of forests on raikar or jafati land, this amendment, while still retaining the previous arrangements, also allowed forestry offices, gaundas or goswaras to do so.

It was not the only formulation of policy but the forests were also given to villagers, and some of which were administered rationally (Robbe, 1954). The effects of this effort can still be observed in many parts of the hills region. Bhatta (1989) encountered the practice under this system in the forests he studied in Kaski district. Fisher et al. (1989) noted some similar history in case of two forests (Ganesthan and Maina-bisauni forests in Sindhupalchok district). Jackson (1990) recorded a chitaidar functioning until 1959 in a forest in Kabhrepalanchok district, indicating that this practice had a long history. Similarly Hobley (1990) has recorded an effort initiated in 1949 for the management of Salgari forest in Banskharka, Sindhupalchok, that reflects the linkage with this system.

The various stages of evolution of the policy of devolving the management responsibility to the local people are detailed in Appendix XII. The policy was first applied in the eastern hills, but it is not clear why this was so. There is not enough evidence why such initiations were made in the eastern hills. The evolution of the system has been directly linked with Brigadier Colonel Dal Bahadur Basnyat, who was the chief of the ban-
goswara in the period from 1908 to 1914\textsuperscript{1} when such arrangements were conceived and enacted. The role of the ban-goswara chief in introducing the new system certainly seems significant, and his background could help trace its origins. The following background is derived from the work of (Mahat, 1985).

- He was from the eastern hills, originally from Dolakha and later shifting to Kabhrepalanchok, and so he had practical experience of the forestry situations and issues of the hills region.

- He was A.D.C. to Prime Minister Chandra Shumshere, so was influential in the administration.

- He was interested in protecting forest. Mahat writes:

  Col. Dal Bahadur Basnet (Basnyat), however, protected the forest in his possession and allowed no clearing for agriculture. Its continued existence through the years appears to stem from a tradition of protection that he instituted, although many changes have occurred.

So on the one hand the chief of the ban-goswara was able to introduce a practical approach to the management of forest in the hills as against the approach taken in the preceding period, while on the other hand, the interest of the then Prime Minister to decentralise the administration (Anon., 1976) made it easy to enact such arrangements.

2.3.5 Harvesting and distributing system

The regulations concerning forest products for the local people recognised two categories of wood - firewood and timber. Timber for individual use and timber for communal use were placed in the same category. Firewood was required to come only from dead and fallen trees, whereas timber was to be collected in the following order of preference:

- dead, dried and fallen trees.
- over-mature trees
- mature trees.

But the extraction of wood had to be done in such a way that (i) forest would not be degraded, (ii) forest would not be opened unevenly, (iii) such extraction would serve as a thinning process, and (iv) trees were cut only in dense part of the forest. In no case were trees allowed to be cut from the

\textsuperscript{1} His name is given for the officer in charge of ban-goswara in the banpala-sanads issued in this period.
forest along trails, *chautara*, sources of irrigation water, religious sites, *sandisarpan* or *panighat*.

The distribution system was simple. In the case of firewood, the joint decision of *talukdar* and *raiti* was enough. In the case of timber for building houses, sheds, inns and bridges, *raiti* had to get *talukdar*’s approval and *vice versa*.

Smoothly functioning of any system requires checks and balances. Any people who infringed the arrangements were liable to punishment. Local people had to initiate the action, while district level authorities had the authority to deal with cases and punish offenders. However, a provision for the central authority to check forests every six months aimed at prompt action and effective protection of the forest.

2.3.6 Conclusion

Early codes of practice developed in the hills region and focusing on the management of specific forests were reinforced by royal orders in the post-unification period. While the legal code of 1854 recognised the norms established by earlier orders, the general principle of involving local functionaries was initiated in 1883 and was finally incorporated in the forest legislation in 1918. Throughout the evolution, the emphasis was on the management of forest resources to meet the local needs. The words *sanad/sanadiya* and *chitaidar* used in the history of forest management are the result of this evolution.

2.4. WAR AND FORESTS

The varied role of forests in regard to the army and defence is a persistent theme throughout the two centuries under review.

Document D48 of 1838 states that 'some forests had been protected formerly for the supply of bows, quivers etc. to the government every year'. Indiscriminate felling had resulted in this supply ceasing so a royal order for the protection of these forests was issued.

Soon, however, warfare involved more than bows and arrows. Ore needed to be smelted for the production of metals, some for use in coinage but much for armaments and munitions. An armaments and munitions factory had been established in Kathmandu in 1793 and munitions factories existed in Pyuthan, Doti, Chainpur, Morang, Kumaon etc (Mahat, 1985). According to the royal order of March, 1800 (D20) to the *dithas* of all
gunpowder factories in the Kathmandu valley, the daily production of gunpowder was one *muri*. The daily requirements of firewood, charcoal, and bark for this purpose are given as 200 *dharni*, 9 *dharni*, and 12 *dharni* respectively and these quantities were to be supplied throughout the year (D20). In the time of Rana Bahadur Shah an order was issued to cast one gun every day: this remained in force for about six weeks, after which three or four a month were founded (Cox, 1824). The fuelwood used in all these operations must have been very considerable (Mahat, 1985). Regmi (1978) has published the recorded *jangi-megjin-rakam* of about eighteen families living at Gagalgaun near Panauti in Kabhrepalanchok. Each was required to provide one *dharni* of charcoal daily (*ibid.*), the equivalent of at least 150 tonnes of fuelwood annually for the community. Similar orders (D18) were issued in March, 1800, to *dware*, *naik*es, and *mahanes* of Dhulikhel in Kabhrepalanchok, and Thecho and Lele villages in Lalitpur to supply one *dharni* of charcoal daily to the munitions factory. The quantity is confirmed (D29) by the concessions granted on October 1812 to the inhabitants of Thecho. Firewood was also to be provided (D19). These practices were initiated, enforced (D64) and continued until at least 1889 (D79).

Other orders relating to war and defence are D10, 24, 29, 39, 59 and 75 issued in the period between 1797 and 1852. Mahat (1985) noted similar evidence relating to the ore smelting in the eastern hills region, and allocation of forests for making charcoal for the iron industry. These documents show that considerable quantities of forest products were being carried by porters over distances of at least 50 km (D75). However, the documents, the *istikhar* (Appendix I) and D119, indicate attempts to convert these obligations into cash.

As a result of all these activities, the forests in and around the Kathmandu valley became so degraded that in 1815 a ban was imposed on land reclamation, clearing, slash-burning, manufacture of charcoal for purposes other than meeting the requirements of the munitions factory, and cutting timber in the forests areas in and around the Kathmandu valley and in part of Nuwakot, Sindhupalchok and Kabhrepalanchok districts (D30). Many of these arrangements were introduced, by the government during and after the 1814-16 war with the East India Company in India, but similar orders were issued in 1822 (D33) and 1846 (D63).

Technological, administrative, and economic developments led to the obsolescence of several *rakam* functions and the expansion of several others. With the modernisation of the Nepali army, which made it almost wholly
dependent on extraneous sources for supplies of arms and equipment, *rakam* labour used in the manufacture of gunpowder became unnecessary when machinery was introduced in gunpowder factories around 1888 (Regmi, 1978). The abolition of magazines in Salyan and Pyuthan around 1907 led to similar results (*ibid.*).

Forests themselves provided a defence wall against invasion from the south. Thus Hamilton (Hamilton, 1819), a member of the first British mission to Nepal in 1802-3 noted:

> The chiefs of the principalities who controlled territory in the Tarai before the Gorkhali conquests made little effort to encourage cultivation, but encouraged extensive woods and contented themselves for the most part with the produce of forest in timber, elephants and pasture, because they were afraid of their neighbours.

The area referred to by Hamilton (1819) was the aggregation of principalities known collectively as South Limbuwan (Mahotari, Rautahat, Bijayapur and Makawanpur) lying in the central and eastern Tarai. Tiwari (1990) has also noted the use of forests as a defensive barrier, and implied that the same policy held throughout the Tarai.

From the beginning of the 19th century the forests of the Mahabharat region are mentioned only in connection with defence. It was considered crucial that the Mahabharat forests of the central region be protected in order to create a barrier against invasion of the Kathmandu valley. In this regard, a letter from a Superintendent of a Company to the Secretary to the government, Political Department of British India in December 1814 states (Cox, 1824):

> Upon the whole, it appears to me that the Nepaulese are desirous of making the access to their capital as difficult as possible to strangers, knowing their own weakness, and how little dependence is to be placed upon their undisciplined troops when put in competition with ours.

The same letter describes one of the strategies of defence as:

> About a half coss [kos] from the summit of the Dunmunna hill [a place on the Sindhuli to Kathmandu route] is a chasm, described as from thirty to forty feet in breadth, of immense depth, filled up partly by nature and partly by art, over which the road, six or eight feet broad, passes. This, however, in case of emergency, can be thrown down to a sufficient depth, so as to make it passable by a bridge only, for which there are plenty of materials at hand, *sauls* [sal] and firs. Should an enemy, however, effect a passage, on the summit is the aforesaid guard-house, which the natives call a *keella*; but is nothing more than a spot of ground which commands the road surrounded with *saul* timbers driven well into the ground, to which round stones of a large size are made fast with rattans. On the approach of an enemy the rattans are cut, and the stone rolling with
increasing velocity down the path, clears all before it, and falls into
the chasm with a tremendous crash.

The importance to defence of the region east of Narayani and west of
Kamala, i.e. south of Kathmandu, was appreciated by an officer of the British
Army on November 1814, who reported (ibid.):

It is asserted, and it may not be doubted, that the shortest distance
from the Terraie [Tarai] to Catmandoo [Kathmandu] lies in the tract
between Hetaunda [Hetauda] and Seendhoolee [Sindhuli]. The attack
of the hills will probably, therefore, proceed through some points in
that space. The same reason which invites the invasion through that
line, may be supposed also to guide the enemy in his descent from
the hills, whether to devastate the low lands or to infest the rear of
the advancing troops. This view of the matter would naturally
suggest, that the positions of the protecting force which is to remain
below the hills, from Hetaunda to Seendholee, should be strong in
proportion to the expected service.

In 1816, a subedar was ordered to remove settlements from an area
south of the Mahabharat lek and north of the Chure hills, to close all tracks
(D31) and to let this area revert to forests. Local people were asked to plant
bamboo, cane and thorny bushes to render the tracks unusable.
Subsequently, other orders were issued in 1817 (D32), 1824 (D34) and 1826
(D35) to remove such settlements to other areas and to develop forests.
These orders were concerned with the central part of the Mahabharat lek
except the general orders issued to check-posts in the Mahabharat region in
1826 (D35). The order issued to a check-post in Salyan in 1831 (D42) also
extended the area of concern to the mid-west. A document of 1831 (D40)
appears intended to impede invaders from the west as they approached the
Kathmandu valley.

This same policy continued to be followed even after Jung Bahadur,
the first Rana Prime Minister, established friendly and cordial relations with
the British, because the undercurrent of fear and suspicion was not
completely eliminated. Oldfield (1880), the British Resident (1850-63), noted:

In Nipal [Nepal] the dhuns [inner Tarai, but here specifically the
Chitawan valley] have been mostly allowed to fall into a state of
jungle, and are consequently clothed with forests of sal and cotton
trees, and are inhabited only by wild beasts. The Nipalese are averse
to the "clearing" of these forests, as they look upon the malarious
jungle at the foot of their hills as the safest and surest barrier against
the advance of any army of invasion from the plains of Hindustan
[India].
Similarly, Captain Orfeur Cavenagh, one of the British officers attached to Jung Bahadur's entourage during his 1850 visit to England, has realised (Cavenagh, 1884) that:

Despite all his public protestations of friendship (Jung Bahadur) retained considerable mistrust of Britain's ultimate intentions towards his country. This came out clearly when Jung explained to him after their return to India, his reasons for not wanting to build a road connecting Kathmandu with the plains. He said that he was sure Britain would one day take possession of Nepal and that if such a road were available for use by the invading force then its builder would go down in history as the author of his own country's destruction.

Not only did the Ranas not accept the construction of a road to Kathmandu, but they also made arrangements to close many of the tracks in the Mahabharat and Chure ranges, leaving only the essential ones open. Orders were also issued to allow all cultivated lands (irrespective of tenure or category) situated on the banks of the Rapti river in the Bhimphedi-Hetauda area to revert to waste land and to evacuate the settlements (D81).

Also a British naturalist wrote in 1880 that Nepal's rulers deliberately protected the malaria-infested forests of the Tarai and forbade human settlement in order to maintain the jungle barrier as a deterrent to British territorial designs (Mishra, 1990).

In contrast to the situation described above, there is no evidence of intention to preserve the forests of the southern ranges for defence purposes after the late Rana times. Legislation still prohibited any cultivation of land which had been banned by previous orders, but enforcement was not vigorous. Indeed, Mahat (1985) has provided evidence that settlement of the Mahabharat in Kabhrepalanchok began only very recently.

The importance of the availability of wood for the construction of channel embankments and dams led to many orders (D44, 45, 48, 64, 70, and 74). Sometimes these water-related orders seem not necessarily for general local benefits but to be aimed at the protection of 'army lands' (D44, 64, 70, 74), by which was probably meant land allocated to soldiers as jagir in lieu of wages. But it (practice of indicating army lands) was only to attract the early action on the petition, as all lands were allocated in one way or other by the government to its employees or to the nobility.

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1 No. 9 of administrative arrangements for the Tarai region, A.D. 1849 (RRS, 1980 pp. 181-6)
2.5. FORESTS AND THE RULING ELITES

As the ruling elites were scattered over all the regions of present-day Nepal during the period prior to unification, the effects of meeting their needs for forest products were hardly noticeable. In other words, pressure was well distributed throughout the country.

The ruling elites based in the Kathmandu valley after unification affected the forests mainly in four ways: the consumption of forest products by their households; the gaining of financial benefits through the sale of forest products; the establishment of areas which were effectively game preserves; and the construction of large buildings, particularly temples and palaces.

2.5.1 Forest products used by ruling elites.

In 1810, a previous order was confirmed (D28) that 26 households from four villages in Lalitpur should supply firewood to dilasal-baithak [possibly a portion of the palace]. Inhabitants of more than 23 villages were mobilised to transport timber in 1805 (D24). Sooner or later these obligations were institutionalised under rakam land tenure.

By 1882, the supply of timber from the inner Tarai towards the needs of the ruling elite was institutionalised (D88). An office, known as lam-adda had been established for cutting timber from the forests of Hetauda and transporting it to Kathmandu (D88). Another office, known as chalani-adda was working under the lam-adda to forward timber from Hetauda to Bhimphedi (ibid.). This timber was mostly used to construct palaces in Kathmandu (ibid.).

In the late Rana period, forest products for the elites were collected not from the Kathmandu valley but from the forests located on the other side of the ring of hills surrounding the valley (Appendix I, D119). This practice continued even after the Rana period; only in 1955 did the government decide in principle that all rakams should be abolished and converted into raikar (Regmi, 1978). But full implementation of this decision occurred only when forest products became available from the Tarai, i.e. after opening the road linkage between Kathmandu and the Tarai in the early 1960s.
It is clear that the forests of Kathmandu and adjoining districts were highly affected by the supply of forestry products to the ruling elites. The situation had deteriorated so much by the beginning of the 19th century that clearing for agricultural purposes was banned and the cutting of forest products was strictly prohibited except for munition purposes. The state of the forest resources of the valley even by 1844 was described by Honoria Lawrence (Lawrence and Woodiviss, 1980) as follows:

There is a large class of household slaves whose work is "hewing of wood and drawing of water". Every evening we meet troops of them returning from the neighbouring hills with burdens of faggots, men and women often singing and generally looking well fed and clothed. Water drawing is not so laborious an occupation here. The firewood grows some miles off but water runs by every man's door.

Fuel and grazing are the two great wants of the poor here...Where every inch is cultivated there is scarcely any grazing ground... The surrounding hills belong to certain chiefs who there cut the timber. Even were it public property, the labour of cutting and bringing it such a distance would make it inaccessible to the poor. Small branches, chaff, dried leaves, sugar-cane from which juice has been squeezed, straw and such like insufficient substances are the firing on which the poor people depend.

Indeed, timber was so scare that every timber long enough for the beam of a house is brought from the Tarai.

2.5.2 Forest products for financial benefits

The ruling elites of Nepal benefited financially from forests (especially of the Tarai) by the sale (export) of forest products or through taxes on their sale.

Tiwari (1990) states that the Tarai forests were used even in Malla times to gain revenue through the export to India of products such as timber, wax, honey, birds and elephants. Prithvi Narayan Shah also was well aware of the possibilities of exports, which he expressed in one of his directives as "send our herbs to India and bring back money" (Stiller, 1968). Administrative regulations of 1793 (Regmi, 1972) attempted to centralise the trade carried on at a local level by providing of incentives to those who sold timber of Shorea robusta and Acacia catechu to the local kathamahal in Saptari and Mahotari districts. However Kirkpatrick's observation in 1793 describes the trade carried on in 1793 in the Tarai region as (Kirkpatrick, 1811):
This forest skirts the Nepaul territories throughout their whole extent from Serinugar to the Teesta... It is not, of course, equally close or deep in every place; some parts having been more or less cleared away, especially those which are situated most favourably for the commerce of timber, or in the vicinity of flourishing towns... The part most resorted to by the wood dealers appears to be that which borders on the Boggah district, timber being transported from thence even to the distance of Calcutta... The Nepaul government levy, I believe, is very high, and consequently, in a commercial view at least, impolitic duties on this traffic.

An order of 1799 (D17) aimed at controlling the trade in wax (see also D77), and there is clear evidence of trade in timber between the Tarai and India by 1809 (Buchanan, 1828). In this period, the government benefited only through duties on the timber sold, but by 1811, a timber export regulation (Regmi, 1972) shows that the government was not only collecting duty but was actually involved in transporting and selling timber to Indian markets. By 1830, revenue was partially gained through a contract system (D41).

In the later half of the 19th century the Tarai forests made a significant contribution to revenue, increasing from Rs 50,900 in the year 1851-52 to Rs 679,600 in 1861-62 (Regmi, 1979) and about Rs 1,000,000 in 1884 (Elles, 1884). This might have been the time when the slogan 'Green forests are Nepal's wealth' was initiated. But in fact, it became the wealth of ruling elites. Regmi (1988) writes:

The third quarter of the nineteenth century witnessed a spectacular change in the nature of the export trade in timber and other forest products. That change was due to two main factors: the growing demand in northern India to meet the growing needs of urbanization and industrialization, and the development of a railway transport system in India. Jung Bahadur appears to have taken prompt advantage of these new opportunities and initiated a number of measures which set the tone of forest policy until around the mid-1860s.

To maximise revenue the ijara system was replaced by the amanat system in 1858\(^1\) to operate kathmahals in the Tarai. The kathmahal had no authority to take any action. In all circumstances cases had to be forwarded to the central authority (D78, 85, 86, 93, 106 and 107). However, kathmahals of the naya-muluk were granted authority in April 1882, to finalise the sale of old timber stocks (D85). By the end of 1860, all kathmahal west of the Narayani river were managed under the amanat system and were headed by

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\(^1\) Order to Commanding general Badri Narsingh Kunwar Rana regarding abolition of ijara for management of kathmahal, Marga Badi 9, 1915 (November 1856), (Regmi 1988, p. 163)
army officers (D111, 112). This system was expanded to the eastern Tarai in 1861\(^1\), and soon there were 18 kathmahals functioning throughout the Tarai region (D114). All the kathmahals were managed under the central control of the kathmahal-bandobast-adda. The performance of kathmahal employees was based on the amount of revenue collected (D82). Even the forests which were protected by certain orders previously were permitted to be felled later in order to increase the revenue (D92).

The other offices involved in the collection of revenue from forest products were dariyabudi and khair adda. The functions of these offices were to manage floated timber and khair. In the far west, these offices were managed by the naya-muluk-rakam-goswara, with the naya-muluk-bandobast-adda in Kathmandu. However, after 1896, when the government adopted the policy of permitting open exports of khair subject to the payment of duty, these offices were abolished and responsibility for collecting export duty and managing floated timber was given to the kathmahals (D108). The kathmahal operation during the middle of this period is explained in a letter from the British Resident in Nepal to the government of India in September 1876 (Girdlestone, 1876) as follows:

Under the system of monopoly now obtaining what happens is that the timber is collected at depots near the points at which the larger rivers leave Nepalese territory. These depots are in charge of government officials, kathmahal being as much a department of state as our own bureau of revenue, agriculture and commerce. The Durbar [palace] prefers to deal with as few persons as possible, because the fewer the holders of timber in British territory the higher the price that can realize, and therefore the higher the initial charge which the Durbar can impose on them.

The management of jhora forest was not under the responsibility of kathmahals. These forests were set aside for reclamation. In the eastern Tarai the management responsibility was given to the goswara (D102). A contract system was established in the west but was soon abolished and the amanat system was introduced (D109).

Forestry operations expanded as the market for forest products grew. When the demand for timber expanded in Darjeeling, a kathmahal was established in Ilam in the last decade of the 19th century (Tiwari, 1990), but it was abolished in 1897 (D110), and elsewhere in Tarai kathmahals were either amalgamated (D87) or abolished (D108, 113, 117).

\(^1\)Forest regulations for eastern Tarai districts (RRS, 1985, p. 133)
During the 1880s, the Tarai forests in Janakpur and Sagarmatha zones were granted as *birta* to Rana families. *Kathmahal* and *mal* offices were involved in the sale of forest products from these forests (D91). Clause 4 of the chapter 'On felling trees' of the legal code enacted in 1854 had given authority for the sale of timber on the *birta* land. Enormous efforts were made to sell the timber during this period (D85, 86, 90, 91, 92, 96, 97, 98, 99, and 106). Though *birta* grants were banned by royal order (D49) this was not enforced in practice. On the contrary even large forests totalling about 6,000 *bigha* were granted as *birta* to the Prime Minister (D122).

By the mid-1880s, two sets of district level offices were functioning under the *kathmahal-bandobast-adda*. The *kathmahal* dealt with the felling and export of timber, whereas *ban-janch-adda* had the overall responsibility for forest protection. Earlier, when there was only the *kathmahal*, there was no controlling system and excess timber was stocked in large quantities. It was to control this wastage that *ban-janch-addas* were established (D95). Though it has been mentioned that the *kathmahal-bandobast-adda* was working under the *madesh-bandobast-adda* (HMG, 1976), it is not likely, from the evidence in orders issued on December 1885 regarding the forest and wildlife conservation (D94 and 95), that this was so.

2.5.2.1 Classification of forests

Forests of the Tarai region were classified at the latest by 1886 (D116) as *jhora*, *sira* and protected. *Jhora* forests were those forests which were not valuable for timber purposes. The interest of the government was to clear such forests for conversion to agriculture and to sell the timber for whatever could be obtained. The responsibility for management of such areas was given to the *goswara* (D102) or, in some cases, to the *mal* office (D109). On the other hand, forests containing of trees of high timber value were classified as *sira* forest. Reclamation of such forests was banned. Protected forests (see D84), were so classified because of their importance for wildlife. The *hatisar* service was created to patrol these forests regularly (D103). The three classifications of forests were descriptive, and forests were not delineated in the field. As a result, a forest had to be determined as *sira* or *jhora* on the basis of its species composition (D78 and 102).

2.5.2.2 System of felling

It is not yet possible to trace the system of felling before 1885. However, forests were assigned by contract to individuals on payment of duties (Buchanan, 1828; Dabaral, 1973). After the establishment of *ban-janch-addas,*
these offices had the responsibility of marking trees for felling. Only the trees so marked could be felled (D95, 98, 99), and even dry timber could not be cut without marking (D98). However this system of marking was applied only in the forests located to the south of Chure (D95).

At the beginning of the present century, sawmills were built in the Tarai as government enterprises to produce railway sleepers for the Indian railways (D116, 118). During the First World War, 200,000 broad-gauge sleepers were offered free of royalty charges to the British government (Collier, 1928).

As the activities of the kathamahals were expanded, more ban-janch-adas were opened1 (K.D., 1980). Furthermore, forest areas were opened for reclamation (ibid.). Collier (1928), the first forestry adviser to the government of Nepal, wrote:

If the merchants of the best type can be found to work this system it will prove successful and profitable, but the chief difficulty is to induce reliable and honest contractors to invest their capital in a country and under conditions of which they may have no experience or knowledge. It was with the object of creating this necessary confidence that the Government has recently enlisted for a short term of years the services of a British forest officer who, with some fifteen years of experience of the working of forests in India, may be able to induce the best class of Indian contractor to work in the far richer forests of Nepal.

The codes of practice throughout this long period dealt with little more than the regulation of felling and related financial arrangements. The first forest working plans were prepared and implemented to some extent in certain Tarai forests before the end of Rana period, just after the creation of the Forest Department in 1942. They originated from the efforts of Mr. E. A. Smythies, the British forester who came as an adviser to the government of Nepal in 1941. Bajracharya (1986) writes on the contribution of Smythies:

He introduced a system of working which paid emphasis for stand improvement. He prescribed separate marking rules and fixed exploitable sizes of the commercial species- sal [Shorea robusta], asna [Terminalia tomentosa], sissoo [Dalbergia sissoo], karma [Adina cordifolia], etc. He gradually prepared working plans for the forests of Morang, Birgunj, Chitawan, Nawalpur [Nawalparasi], Banke, Bardiya, Kailali and Kanchanpur, and for some birta forests as well. Mr Smythies had also made some fire-lines to protect forests from fires. These plans were gradually implemented while Mr. Smythies was here.

1 In 1908, ban-janch offices were opened in Sarlahi, Rautahat, Sheoraj, Dang, Deokhuri, Morang, and two districts of Nayamuluk region.
Smythies's plan divided the Tarai forest into three circles and thirteen divisions. Each division was further divided into 2 or 3 ranges and each range into 5 or 8 beats.

Several others (Ratauri, Chaturvedi and Pal) from the Indian Forest Service were appointed as forestry advisers but all of them were engaged in structuring the organisation rather than forest management. The motive behind the organisation was to exploit the forests to the greatest possible degree. Mr. Ratauri, who replaced Mr. Smythies, did not hesitate to propose recruiting some retired Indian forest rangers as Divisional Forest Officers with the intent of maximising the revenue from the Tarai forests.

2.5.2.3 Forest legislation and adjustments

Forest legislation changed through amendments to the legal code of 1854 in 1918, 1923, 1935 and 1948 (Appendix XII). The amendment made in 1935 listed tree species protected from cutting without permission. The amendment of 1948 introduced some scientific norms into the forest legislation. However, these legislations were heavily used to centralise the revenue within ruling elites (conditions of using timber from birta forests in the legislation and in D122 represent the two situations).

The following quote from document D121 is an example of early legislation (1922) addressing, in part, the problem of differentiating, within a given class of products, those that arise in the hills from those that arise in the Tarai. 'In case it is proved that pine torches produced from the forests of the Tarai region are falsely represented as produced in the hills regions and offered for sale and purchase in the market, the appropriate forest office shall take necessary action'.

2.5.2.4 Conclusion

Throughout the period from unification to the fall of the Ranas, the management of the Tarai forest aimed at maximising the revenue, through a system of felling and export, with associated changes in organisation and in legislation. There is no convincing evidence that the forests in the hills were managed with the same objective as for Tarai forests. However the introduction of a monopoly on the export of medicinal herbs provided some revenue from the hills region to the governing elite.
2.5.3 Gardens, wildlife and hunting reserves.

When Shiva Singh Malla became King of Kantipur in 1585, his wife created the garden around Budhanilkantha which was named Rani-ban. The forest was later extended to other areas in the Kathmandu valley, even beyond to Nuwakot district; and by the middle of the 18th century similar forests had been developed at all the religious sites such as Swayambhu, Balaju, Gokarna, Changu and Bajrayogini (Tiwari, 1990). Killing jackals, monkeys, and snakes, illicit collection of any forest products including firewood, and lighting of fires were listed under the panchamahapatak and were forbidden (ibid.). Thus such offences were linked with the religious nature of places.

After unification, the practice of protecting forests in and around temples continued. Orders were issued to manage the forests of Machchhendranath (D25) in 1805, the forests owned by the temples of Nilvarahi and Mahalaxmi in the Bode area of Bhaktapur (D55) in 1843 and the forest around Harihar cave in Kaski (D69) in 1849. As in the previous period, these initiatives cannot be assumed to have been solely for the benefit of the ruling elites.

Wildlife was long prized by the governing elite as an economic resource, as food or as targets for hunting. Many orders therefore relate to wildlife and sometimes to areas which were virtually hunting preserves or wildlife reserves.

Early orders of 1798 (D13) and 1799 (D15) refer to the rhinoceros but it is not explained why 'there is a great need of rhinoceros' in Kathmandu.

Tarai forests afforded a source of profit to the government in the form of their numerous elephants. Between two and three hundred elephants were being caught annually from a single district of the Tarai in the 1890s (Kirkpatrick, 1811). In this regard, Hamilton (1819) has written:

The raja reserves to himself the sole right of catching the elephants, and annually procures a considerable number. They are sold on his account at 200 mohurs [mohar] or 86 rupees, for every cubit of their height, but five cubits of the royal measures are only six English feet. As few merchants are willing to give this price for elephants which have not been seasoned, the raja generally forces them on such

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1 Tiwari (1990) mentioned also that the forests around Kathmandu valley were known as rani-ban since that period.
2 A petition submitted by the mijhar of Thansing, Nuwakot reveals that some rice land was sanctioned to the chitaidar of the garden (RRS, 1980 p. 186-8).
persons as have claims on the court, who sell the elephants in the best manner they can.

Similar efforts were initiated in the Tarai by creating certain protected forests and issuing orders regulating their use (D84). These orders were enforced further in 1885 by further orders issued to the administrative heads of the Tarai regions through *madesh-bandobast-adda* (D94), and to the heads of the *kathmahals* and *ban-janch-adda* through *kathmahal-bandobast-adda* (D95).

In 1883, arrangements (D89) were made to give the responsibility for controlling use to local functionaries and the orders set out their functions, duties and privileges. These arrangements were extended in 1886 to some of the *birta* forests in the Kathmandu valley and adjoining areas (D100, 101). The motive behind these orders was to regulate game hunting. Though Mahat (1985) and Mahat *et al.* (1986) thought that these orders arose from a recognition of the critical situation of deforestation, this seems unlikely because if it were so the Prime Minister or government would not have confined the orders to the forests of their own *birta* land.

Similarly the regulations made in the name of Rangeli *goswara* in 1886 (D102) and for the Tarai and inner Tarai in 1888 (D103) reveal that some of the forests in the Tarai and inner Tarai were protected under a system whereby game hunting required the permission of the ruling authority.

In the late Rana period, the system established in the previous period was institutionalised. The legal code was amended in 1923 to enhance the protection of trees and forests at religious sites and forests around Kathmandu valley which became the private property of Rana families. In addition, conservation of musk deer was initiated, and the government employed some officials on the Nepal-Tibet border with an obligation to supply musk (D120).

2.5.4 Temple construction

Just two decades after the shift of the Gorkhali capital to Kathmandu, there began in 1796 an attack on the forests in and around the valley to construct the Jagannath temple in Kathmandu. Later a Shiva temple was constructed in 1845. These constructions involved many forestry products and many orders were issued. Among the forestry products listed were *sal* gum (D6, which was imported from India), *babiyo*, timber, and firewood to bake bricks.
Each household in 28 villages adjoining to the east and the west of the Kathmandu valley was ordered to supply one load of *babiyo* in July 1796 (D3).

In the next stage, firewood was collected by *jhara* labour of the people from the hills regions, excluding the Kathmandu valley (D4). Orders were made in October 1796 for people to come to Kathmandu with food for six months, and firewood cutting tools. Other inhabitants of some of the villages in the Kathmandu valley were ordered in May 1797 to supply 20 *dharni* of firewood (D11). However, in July 1798 the inhabitants of Thak and Theni (far away in the Kali Gandaki valley) were given the following options in this connection (D12).

a. One person from each household shall provide *jhara* labour for the transportation of firewood, bringing food needed by him over a period of six months, or

b. Purchase 8,000 loads of firewood and deliver them at Kathmandu, or

c. Pay a sum of Rs 2,001 in *mohar* and *paisa* coins used in Kathmandu, or

d. Pay a fine of Rs 10 from each household.'

From the way the population was mobilised, it seems that the harvest of a huge quantity of firewood was undertaken, probably to supply the large work-force involved.

The next forest product needed for the temple construction was timber. The supply of timber in small quantities was from adjoining areas (D5) but large quantities were transported from Hetauda in the nearest part of the inner Tarai (D7, 8, 61). Timber was also cut and transported from the forests of Nuwakot during the construction of the Jagannath temple (D11) and from Sindhupalchok district during the construction of the Shiva temple (D60).

**2.6 ARRANGEMENTS FOR THE CONTROL OF FOREST USE**

Post-unification orders concerning forests did not discriminate between various land tenures, i.e. *raikar, kipat, birta, and guthi*. The absolute right to use forest products was thus not vested in the land-holder, though *birta* owners were appointed as *chitaidars* with responsibility for regulating the use of forest products by those living nearby. In some cases, access rights were stated to differ from hamlet to hamlet.
In this early period, those made responsible for implementing orders can be grouped as:

a. Local functionaries such as *amalidar, mijhar, amali, dware, ijaradar, umra, thari, mukhiya* and *gaurung*;

b. Land owners such as *talab* and *bitalab* holders, *mohoriyar, birta*, *chhap, guthi* or *kipat* owners;

c. Ethnic communities such as *Brahman, guthiyar* and *khaniwara*;

d. Elite groups such as *jethabudha, naike, bichari* and *tharghar*;

e. *Chitaidar* (also known as *mahane* or *biset*) and

f. Inhabitants such as petitioners and peasants.

In many cases, orders authorised members of the Brahman/Chhetri castes to be effective agents (D36, 37, 42, 44, 52, 53, 54, 56, 62, 64, 65, 70, 72, 73, 74) but two granted authority to Newars (D43, 55), one to Limbus (D68), one to Giri (D69) and one to Magars (D71). However, document D48 authorised Brahman/Chhetri and Magar jointly, and D72 authorised Brahman/Chhetri and Gurung jointly. Some of these documents (D56, 65) recognised the existence of members of other castes but authority was not given to them. Nonetheless, all four castes and thirty-six sub-castes had a responsibility imposed on them to supply forest products to the palace and ruling elite (D24).

The codes of practice were mostly motivated by the protective role of the forests. Conserving soil and water was known to be vital in productivity of the land. During the time of Prithvi Narayan Shah it was understood that destruction of forests would lead to a decline in rainfall and undermine the productivity of the soil (Acharya, 1966). The wider acceptance of this principle made it easy to get land-owners and tenants as guardian of the forests, and so this was commonly done (D36, 50, 53, 57, 62, 64, 65, 66, 68, 70, 72 73, and Appendix XII). Other specific arrangements were made in the following instances:
a. In 1805 the *chitaidars* of Machchhendranath temple were given the responsibility of managing forests in the *guthi* land of Machchhendranath (D25). They were paid out of the produce of the land belonging to the temple. *Bhardar, amalidar,* and revenue collectors were ordered not to create any trouble on lands belonging to the god. Thus revenue which otherwise would have gone to the central treasury, came to be spent on forest management.

b. In 1808 a *daroga* was appointed to supervise the forests in the Harmi area of Gorkha (D27).

c. Documents of 1815 (D30) show that forest guards were employed to protect the forests in and around the Kathmandu valley. There is no evidence from these documents to argue that the forest guards were paid from the central treasury, but a later document D89 suggests that they were military personnel and so would have been paid. So forest guards were not necessarily appointed from the local people.

d. In 1817 one *subedar* was deputed to protect the forests of the Mahabharat region (D31).

e. In 1827 four local households of Chhatyali village were appointed as forest guards and were granted *banpala* authority to protect the forests on *chhap* land in the Nala area of Kabhrepalanchok, and these households were exempted from paying rent on the land (Tiwari, 1990).

f. A forest in Kaski district had been reserved for the supply of timber to construct embankments along the Pardi canal. In 1834 a *chitaidar* was appointed to protect that forest. The *chitaidar* was paid five *muri* of paddy every year from rents on lands assigned for that purpose (D45).

g. In the forests of Nilvarahi and Mahalaxmi, a *chitaidar* complained that the forests could not be protected, as the *chitaidar* and *mahane* were placed under the obligation of working for the local *amal* and authorities (D55). As a result *chitaidars* were exempted, by an order issued in 1843, from all forms of unpaid labour obligations.

h. A document of 1843 (D56), relating to the forests in a village of Kabhrepalanchok, reveals that one of the forests was always protected by the officials of the *kot* (fort).
i. An order (D62) relating to the forests of the Machchhegaon area in Lalitpur states: "appoint mahanes to protect the forest, water-spout and roadside shelter at Balagaun; do not impress unpaid labour from them for other purposes."

j. In 1847 the chitaidar of Sailung area forest in Dolakha was empowered to collect fines and penalties from people who acted in contravention of the regulations and to remit the income to the sadar-dajdarkhana in Kathmandu (D65).

k. When local functionaries were employed as forest guards in place of personnel deputed from the army, their functions, duties and privileges were defined, and they were authorised to share among themselves the income from the fines and penalties (D89).

2.7 THE INTENT OF ORDERS

The aim of most orders was, to use modern terms, forest conservation attained by authorising certain people, or groups of people, to control utilisation in ways stated in the orders. The main emphasis was on growing 'green' trees, although some orders also related to growing other biomass such as tree leaves, fodder grass and thatching grass (khar). Usually there was no stated prohibition on the gathering of dead wood or other dead forest materials, although there is an exception to this (D101).

The aims of the orders which I have studied can be summarised as:

a. environmental protection (Appendix XIV, D25, 27, 31, 32, 34, 35, 36, 40, 42, 48, 50, 52, 57, 62, 64, 65, 66, 67, 69, 72, 73, 81 and 83). However the ultimate aim of documents D31, 32, 34, 35 and 42 was to avoid invasion from the south,

b. ensuring the continued availability of a specific forest product (Appendices II, XII and XIV, D9, 22, 30, 33, 38, 43, 44, 45, 47, 48, 50, 51, 53, 54, 56, 57, 58, 63, 64, 65, 67, 68, 70, 71, 74, 80, 89, 94, 95, 100, 101, 120 and 121),

c. regulating the obtaining of tree species of commercial value (D17, 41, 76, 77, 78, 82, 85, 86, 87, 90, 91, 92, 96, 97, 98, 99, 102, 103, 106, 107, 108, 109, 110, 111, 129, 113, 114, 116, 117, 118 and 121),

d. wildlife conservation or hunting (D13, 15, 69, 84, 94, 95, 101, 102, and 120). In addition, the documents D36, and Appendices II and XII also seem partly associated with this intent.
Generally, the intent of early orders was to prevent indiscriminate use of forests (Appendices II, XII and XIV; D9, 22, 25, 27, 30, 31, 32, 33, 34, 35, 36, 37, 40, 42, 43, 44, 45, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 78, 83, 84, 89, 94, 95, 100, 101, 102, 103, 105 and 121). Direct use by owners was permitted but sale of forest products was discouraged or forbidden (D78, 103, 121).

2.8 CONCLUSION

On the basis of all this historical evidence, it can be concluded that codes of practice varied in the four geographical regions in which the forests were located, as follows:

**Forests in and around Kathmandu valley**

Before unification these forests were managed with emphasis on local needs, but this was affected by the rising interest of ruling elites just after the capital was moved to Kathmandu. For the first century after that, the forests were used heavily for defence purposes, and later they became the property of the ruling elites. Almost all orders relating to these forests were imposed by the central authorities. In most cases paid watchers were involved in forest protection.

**Forests of the Mahabharat region**

Interest in the forests of the Mahabharat region developed only when relations with British India became tense, so they were preserved as a defence wall till the end of the last century.

**Forests of the hills region**

For the forests of the hills, the codes of practice were established as customary, indigenous codes and emphasised the local community. Whenever their effect was threatened these codes were safeguarded by royal orders, sanads, sawals and later by legislation. Though they were promulgated as specific orders in the beginning, the role of local institutions was enhanced in the late Rana period and most of the codes then developed out of local initiatives. Although imposed practices occurred in some instances, these were in response to petitions or other forms of local interest. The forests of the hills region were not used for financial benefit.
Forests of the Tarai region

Forests in the Tarai and inner Tarai were always exploited as sources of revenue for the ruling elites. The exploitation of these resources was carried out in a rather piecemeal manner until the beginning of the Rana period. Utilisation was done intensively, by creating a department, since the early 1860s. The system aimed not at managing the forests properly but at increasing the revenue. The introduction of expertise of a professional forester was also to increase the revenue. Local needs were fulfilled by the left-overs from such commercial extraction.

Thus it is clear that codes of practice existed in Nepal long before the introduction of strong Western influences in the middle of the present century, and that they varied with geographical location. The chapters following this will deal with the forestry of the hills region, with emphasis on specific forests.
3. FORESTRY AT THE LOCAL LEVEL

I: THE METHODOLOGY

3.1 PERIOD OF FIELD WORK

Though my field work as an enrolled student of ANU was carried out only between November 1989 and February 1990, my field experience covers much more than this period. Evidence was gained over the period of more than a decade, during my work in Trishuli Forest Division (comprising Rasuwa, Nuwakot and Dhading districts), Gulmi District Forest Office (comprising Gulmi and Arghakhanchi districts) and Dolakha district as divisional/district forest officer.

The timing of my thesis field work was intended to fit the farmers' convenience. There is in fact hardly any leisure time for farmers throughout the year so the only option was to select the least busy season. The period selected was between the summer crop harvest and the main winter crop planting season. Though Chambers (1985) has claimed the selection of the post-harvest season for field work is the result of dry season bias, this is not true for forestry because this is the season when local people are most concerned with forestry matters. This is even demonstrated by the dates indicated in various documents collected in the field (Appendix I, II, VIII, X, XI, one of XII) and other documents (D45, 48, 50, 54, 62, 63, 64, 65, 66, 67, 72, 73, 74 and 78), whereas documents in Appendices III, IV, V, VI, VII, and some of XII indicate dates slightly later, but still prior to the rainy season.

3.2 SELECTION OF SITES FOR FIELD WORK

I selected three sites for my field work - the Betini, Kamang and Sallepakha forests. Geographical locations of the study sites are given in Figure 3.1.

Selection of these sites was facilitated by my previous employment. While I was working in the hills districts in general and Dolakha in particular, I had encountered two classes of forests from the point of view of their management - those which were managed and those which were not managed. Management systems were either locally developed or centrally imposed and here are categorised accordingly as self-originated and imposed (Gautam, 1987). Kamang forest was in the former category and the Sallepakha in the latter. This was attested by rangers at a workshop (Anon., 1988), and on this basis, I selected these two forests for study.
Figure 3.1 Map of Nepal with zones and study areas
I had known the Betini forest since 1979, when I was first posted to Trishuli Forest Division. During my tenure of office in that division, i.e. 1979 to 1983, I encountered many positive efforts to implement local management in this forest, but as a forest administrator I never had to deal with any cases related to Betini forest. Since then Betini forest always came to my mind as an example of indigenous, local or traditional management of forest so I decided to include this forest in my research. The purposes of including the Betini forest were two. Firstly it differed from the other two forests regarding accessibility. Secondly, by including the forest in my field study, I would have observations on the forest for a period of more than a decade.

I considered whether to include field work in an area where I had never worked as a forest officer, in case the local people would not speak openly or frankly to me as a forestry officer. Considering the short period available for my field work, however, the advantages of building on existing knowledge seemed to outweigh the disadvantages, allowing me to approach the depth gained by total immersion in an area (Chambers, 1983). If more time had been available, the inclusion of other field work areas would no doubt have been desirable.

3.3 GEOGRAPHICAL SIZE OF FIELD WORK

The users of the respective forests were the sources of information. The settlements of the users, eventually, became the areas of study, rather than wards or panchayats. This decision was biased on my own experience gained through working in the districts where I encountered many difficulties when using artificial boundaries based on a ward or a panchayat. The nature of difficulties which have arisen while working with the political unit is documented in Gautam (1987). In addition, political boundaries have been changing frequently to fulfil the interests of political groups, often leading to the break-up of indigenous institutions and/or organisations.

Nonetheless, the emphasis on the settlements of the users presented some difficulties. Users varied widely in the extent they used some particular forest. However, it was intended to include all the local people who used the forest for obtaining any sort of forest products. The main difficulties were faced in delineating the households of Pata and Purangaun as users of Kamang. Most of them use the Kamang forest for leaf litter so they were included as users. Similarly it was also found that all the
households, even of a single hamlet, cannot be grouped as users because precise use depends on the location and convenience of the household.

3.4 METHODS OF INFORMATION COLLECTION

I gathered two types of information through a questionnaire and through discussion with local people. One was information regarding the patterns of use, which I obtained from all users. The other concerned the history of management, which I obtained from selected users. However, non-users were also sometimes found to be good sources of information regarding the forest management in the wider context.

3.4.1 Usage patterns

a) The questionnaire

Although the questionnaire was designed to collect mainly qualitative information, it included a small number of quantitative questions in the first part. No effort was made to get the information using standard units (e.g. kg, ha etc.), as it was understood that people use their own unit comfortably and confidently in giving information on landholding. The landholding unit the local people use is the closest to the reality so far as comparison between households is concerned. However, a conversion factor was derived on the basis of discussion with knowledgeable villagers (Rüsten, 1989). Qualitative information was obtained from household heads, although other family members were involved in the discussion in some instances.

The questionnaire was originally prepared in Nepali and was later translated into English. The original Nepali questionnaire was used in the field. A discussion was held with local people to clarify the meaning and sense of some of the words or terms, as I was familiar with the situation where certain of the terms had different meanings in different regions or villages.

b) The sampling procedures

Respondents were not selected randomly or through formal stratification as done by Fox (1983) and Bhatta (1989), because such procedures would have been virtually impossible to implement, given the constraints of time, distance, topography and available manpower. Instead, the procedure focused on 'household to household visits'. The guide-lines for the various steps were the following:
• Visit every household within the settlement of users.
• Collect information if they themselves are available and willing to provide it.
• If no one is in the household, eliminate that household from the survey.
• If the time of the visit is not suitable for the people, make another time. If on the second visit no one is available, eliminate the household from the survey.
• If the people do not want to give their time do not insist, and eliminate the household from the survey.

The reasons for this procedure were:
• Respondents should not be compelled to answer. If they are compelled, they may not give the correct answer or they may try to finish the answer as soon as possible even if inaccurately.
• Even if they are happy to answer, they may not have the time.
• The purpose of the field work was to collect more, and more reliable, information but not to obtain complete coverage. The reliability of the information depended very much on the nature of the person and his understanding to the situation and the question.

3.4.2 Sketching the history of management

The history of management of the forests was gleaned from oral and documentary evidence. Though this section of my work was heavily influenced by information from the key informants, inferences from the study of usage patterns were very useful in supplementing and confirming information, and, in some cases, providing a basis for discussion with key informants. The multiple approaches process as defined by Chambers (1985) was therefore the basis of my method.
PLATE 3.1 Discussion with people in Melung

PLATE 3.2 Discussion with Mr Lalit Bahadur Karki
3.4.2.1 Selection of key informants

Key informants were selected on the basis of discussions with users during the study of usage patterns. The informants were selected on the basis of their interest in the matter, level of information available from them, their involvement in forestry matters etc. However, people from the following groups were considered especially valuable as key informants:

- Old people who were involved in any forestry activity in the past;
- Old people in general;
- Former local functionaries; and
- People currently involved in or affected by forestry activities (development, administration etc.).

Sometimes it was found that people other than the users were suggested as sources of historical information.

3.4.2.2 Approaches to information collection

The information from the key informants was collected through discussion. A questionnaire was developed as a check list in the beginning but was used only as reference during discussion. Answers on all the points in the questionnaire were not sought from each of the key informants, since it would have been impossible to get them. The emphasis varied with the nature of the role of the particular key informant in regard to the particular forest.

In addition to oral discussion (Plates 3.1, 3.2), it became possible to collect some documents relating to the forests and forestry of the areas. This is a sign of the development of a successful rapport with the local people, because unless people trust the interviewer the collection of such documents is not possible.

3.5 ORGANISATION OF FIELD WORK

Two research assistants were involved during the field work. They were solely used to record the information on usage patterns. They were reliable, graduates (one in science and one in arts) and were well acquainted with hill farmers (Chambers, 1985), as they had grown up and been educated (up to high school level) in the rural area of Gorkha district in the hills region. However, being accompanied by a local person was found to be very helpful in overcoming suspicion (Fisher, 1986).
During the first five days in Bhusapheda, we all worked together in the same households. Afterwards, I was present for some or all of each interview and gained more general information whilst the assistants concentrated on the more questionnaire data. However their discussions, in some instances, provided general information.

On average, each research assistant contacted three households every day. Morning was the best time for the villagers, and evening time was also used effectively. It was possible to arrange day-time meetings with some of the households.

My discussions with the key informants usually took place during the day, as the people selected were usually old, and worked at home or near, mostly making bamboo mats, splitting bamboo or working in the homestead (Plates 3.3., 3.4). However, I also had opportunities to discuss with some key informants while they were working in the field. It was possible to discuss with only one key informant in a day, although it was sometimes possible to include a short follow-up visit to another household on the same day.

Time in tea-shops, and in some other informal gatherings (Plate 3.5) was fully utilised in discussion. Discussions with the teachers and sometimes the students in the local school sometimes helped in cross checking the information given by the local people. Two full Wednesdays were spent in the hat (market) at Melung, which provided an opportunity to observe the products in the local market and to meet people in a group (Plate 3.6).

3.6 STUDY OF THE CONDITION OF THE FORESTS

The status of a forest was assessed by travelling in it and taking photographs. The status of forest use was assessed through observing conditions inside the forest, and people encountered in the forests and on approach paths. This also helped identify the forest products in use.
PLATE 3.3 Mr Dhan Bahadur Tamang when I was talking to him

PLATE 3.4 Mr Marta Singh when I was talking to him
PLATE 3.5 Informal gathering in a Kami house in Pata.

PLATE 3.6 Melung hat on 10.01.1990
However, by means of repeated walking and searching through the area from one extreme to another, a centralised replicate sampling (Mueller-Dombois and Ellenberg, 1974) was also used to select the samples. In this way, three distinct zones were identified in Sallepakha forest: areas close to hamlets, areas close to trails, and the remote areas. However, for the other two forests, there is no distinction as far as condition is concerned.

The following were the factors considered in assessing the condition of the forests.

(a) Structure

Structure of the forests was assessed on the basis of vertical cross-section. Mainly the observations were recorded as: top storey, middle storey, shrub and ground cover.

(b) Density

Density was measured only for trees taller than 2 m. The 'count-plot method', as described by Mueller-Dombois and Ellenberg, (1974), was used for counting trees per unit area. It was also done through measuring the distances between trees and calculating the mean. Numbers of stumps and evidence of uprooting were also noted.

(c) Crown cover

Crown coverage was recorded as the percentage of the canopy covered by tree crowns. The 'line intercept' method (Mueller-Dombois and Ellenberg, 1974; Metz, 1991) was followed. However this information was also used to state the broad classification of the crown cover.

(d) Regeneration status

Regeneration status was assessed on the evidence of seedlings or saplings (from seed or coppice) of height between 0.3 m and 2 m. The coppice shoots of trees above 2 m in height were considered as only branches of the trees, and not as regeneration.

(e) Lopping condition

This condition was simply assessed on the basis of presence or absence of lopped trees.
3.7 EXPECTATIONS AND ACHIEVEMENTS OF FIELD WORK

In the beginning it was thought that there were about 600 households using the three forests and I expected to contact 50 per cent of these households. Field work showed the numbers to be greater, and at the same time the responses from the local people were encouraging. The households in the Kamang and Sallepakha were contacted as scheduled, but it was not possible to cover all the groups of users of Betini and only two of the three groups of users were studied there.

3.8 USE OF INFORMATION IN THE THESIS

Information collected in the field is best used where it is actually needed in the thesis. Attempts have therefore been made to include the relevant information under the respective case studies. While reading the individual case studies, however, some information would seem irrelevant, but these are required and used in the discussions (chapter 7) of three case studies.
4. FORESTRY AT THE LOCAL LEVEL
II: THE BETINI FOREST

4.1 THE FOREST

4.1.1 Location

Betini forest lies in the southern part of Nuwakot district in Bagmati zone. Till recently the forest area was in both the Madanpur and Belkot village panchayats. After repeal of all tiers of the panchayat system early in 1990, it is now under the Madanpur and Belkot village development boards.

The Betini forest is in a single block of area approximately 200 ha forest physically located on the northern aspect of Kakani-Jhiltung hill. However, except in the south the forest is exposed to all aspects due to foldings of the block. The altitude of the forest ranges from Betini-dovan at 1000 m a.m.s.l. to Arukharka-lek 2100 m a.m.s.l. The slope varies from gentle in the lower part to precipitous in the upper part, but the majority of the forest area has a gentle slope.

The Betini forest is easily accessible from the all-weather Kathmandu-Trishuli road which passes through the middle of the area. It is equidistant from Bidur, the district headquarters, and Kathmandu. Although the road distance is about 35 km from Bidur, it is only a 3 hr walk along a short-cut trail.

The location map of Betini forests and its surroundings is presented in Figure 4.1.

4.1.2 General land-use pattern

A land-use survey was not made specifically for this study. It is not easy to define an appropriate sample area to assess land-use patterns, as the users might also be using land outside of that area in some instances. The pattern of land use is not only related to the settlement of the user but also to the total land used by him in the locality. So before studying the relationships between different land-use types, one needs to be clear as to the extent of the land held by the user in the locality. Because of the characteristics of landholding in the hills of Nepal, it is not possible to

---

1 Since this repeal all village panchayats have been working as village development boards throughout the country.
delineate such in a block perfectly and conclude the relationships between different land-use types as established by Wyatt-Smith (1982). However to gain a general idea of the locality, a simple approach was selected, based on discussion with the users who were the only sources of reliable information.

Table 4.1 shows the land-use pattern in the locality and compares it with the national, regional and district patterns. Although the proportion of natural forest is slightly higher for this locality than for the district and lower than for the whole nation and the region, the proportion of agricultural land is more than double. Thus the same unit area of forest has to support more agricultural land here than in the rest of the district, if the figures are to be relied upon.

Table 4.1 Land-use pattern

<table>
<thead>
<tr>
<th>Land-use types</th>
<th>Nepal 000 ha (%)</th>
<th>Mid-mountain 000 ha (%)</th>
<th>Central region 000 ha (%)</th>
<th>Nuwakot 000 ha (%)</th>
<th>Specific area ha (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural forest</td>
<td>5424 (37)</td>
<td>1762 (40)</td>
<td>1028 (37)</td>
<td>28 (24)</td>
<td>411 (28)</td>
</tr>
<tr>
<td>Plantation</td>
<td>69 (0)</td>
<td>30 (1)</td>
<td>29 (1)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Enriched forest</td>
<td>25 (0)</td>
<td>19 (0)</td>
<td>6 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Degraded forest</td>
<td>706 (5)</td>
<td>404 (9)</td>
<td>238 (9)</td>
<td>21 (18)</td>
<td>115 (8)</td>
</tr>
<tr>
<td>Grassland</td>
<td>1745 (12)</td>
<td>278 (6)</td>
<td>138 (5)</td>
<td>4 (3)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Non-cult inclusion</td>
<td>998 (7)</td>
<td>667 (15)</td>
<td>239 (9)</td>
<td>21 (18)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Farmlands</td>
<td>3052 (21)</td>
<td>1223 (28)</td>
<td>818 (30)</td>
<td>39 (32)</td>
<td>956 (64)</td>
</tr>
<tr>
<td>Other land</td>
<td>2729 (19)</td>
<td>59 (1)</td>
<td>238 (9)</td>
<td>6 (5)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Total</td>
<td>14748 (100)</td>
<td>4442 (100)</td>
<td>2734 (100)</td>
<td>120 (100)</td>
<td>1482 (100)</td>
</tr>
</tbody>
</table>

1 Information regarding land use at national, regional and district level, here and elsewhere in the thesis, is according to Forest Resources Information Status and Development (HMG, 1988). So the definition of land-use types follows the same reference. The information regarding the specific area (east of Amare Khola, west of Singare Khola, north of Kakani-Jhiltung ridge and south of Dharne Khola) is calculated from the Land Utilization Maps (HMG, 1984).

2 This district has one of the oldest plantations, established partly by Trishuli watershed management project in the beginning and by the then Bagmati Zone Plantation Office in the early 1970s but this is not indicated in document HMG(1988).
Figure 4.1 Betini forest and surroundings
4.1.3 General description of the forest

4.1.3.1 Composition of species

Castanopsis spp. (C. tribuloides and C. indica), Schima wallichii and Myrica esculenta are dominant among the tree species. Alnus nepalensis, Syzygium cumini, Mallotus philippinensis and Machilus odoratissima are mixed in the top storey. Maesa chisia and Mallotus philippinensis constitute the second storey in most of the forest. Mimosa himalayana, Clerodendron infortunatum, Woodfordia fruticosa and Zizyphus incurva are among the shrubs available in the forest. The sloping ground is covered with grass. Smilax menispermoidea and Asparagus officinalis are available in places. Among the climbers, Eurya spp., Bauhinia vahlii and Dioscorea spp. are noticeable.

4.1.3.2 Forest type

According to the land-use map prepared by HMG (1984), Betini forest is categorised as Hardwood Deciduous Mixed Broad-leaved with crown density above 70% and immature. The maturity class given here does not suit this type of forest, as the criteria which define the maturity classes seem based only on the timber-producing species.

According to the classification of Champion and Seth (1968), this forest falls within the category of northern subtropical broad-leaved hill forests, and the specific category of Castanopsis-Schima forests of eastern Himalayan subtropical wet hill forests.

The forest type is Schima-Castanopsis as described by Stainton (1972). Stainton (ibid.) concluded it was quite wrong to think of this type of forest as forming one continuous belt within the range of middle hills, which contains the zone of maximum cultivation. The present discontinuity may be explained, as this type of forest is present only in the moist patches of the zone on north and west slopes.

Mahat (1985) has noticed Shorea robusta in this type of forest but it was not found in the present case. However the other hills facing Betini forest have Shorea robusta at altitudes comparable to the lowest part of Betini. Stainton (ibid.) found Shorea robusta and also Quercus incana, Q. lanuginosa and Pinus roxburghii forests on the southern or eastern slopes in the drier conditions of this altitudinal zone in the east and central midlands.
of Nepal. This type should be dealt with as a separate forest type, and should not be confused with *Schima-Castanopsis* forests.

4.1.3.3 Forest use and its effects

Betini forest has been used ever since the time of the earliest settlements around it. The present appearance of the forest reflects the effectiveness of the controlled-use system applied in the forest. Whatever other restrictions were imposed for the protection of the forest, the collection of dry twigs, leaves, fruits and grass has never been prohibited. This fact can be observed in the forest on any day of the year.

The canopy of the forest is fully covered. There is no evidence of concentrated use or degradation in the peripheral area. While a few stumps and wood chips were observed in the middle of the forest, the canopy has not been opened as a result, which indicates the use of a few suppressed trees.

4.2 FOREST USERS

Broadly speaking, the users of Betini forest reside in three villages, Pakhure to the east, Tigaun to the west, and Arukharka to the south of the forest. The first two villages are on the northern aspect and the third is on the southern aspect of Kakani-Jhiltung hill. This study is confined to the users in Pakhure and Tigaon villages (see section 3.7).

4.2.1 Settlement pattern

The users are settled in groups. Although at Tigaun they reside in scattered groups of houses which range from the bottom to the top of the hill, the whole village is subdivided into Tallo (lower)-Tigaun and Upallo (upper)-Tigaun which lie in separate wards. (Elsewhere in the thesis these are written as Tallotigaun and Upallotigaun, and Tigaun indicates both these villages). Again these villages are divided into hamlets, mostly based on the settlements of clan groups, such as Paneru-tol, Regmi-thok, Kami-tol, Lama-tol, etc.

Pakhure village is a single village with many groups of clustered houses. This type of clustering is the outcome of the fragmentation of inherited land. This village is subdivided into sub-villages as Raila-gaun, Thulo-ghar, Mathillo-tol etc.
4.2.2 Ethnic composition

The ethnicity of the hills region between the Budhigandaki and the Likhu Khola (i.e. east of Gorkha and west of Okhaldhunga) is more or less the same, and the Tamang community constitutes a significant proportion (from my personal observation). The only differences are in the percentages of the various groups from place to place. Tables 4.2 and 4.3 present the ethnic composition of the area by household.

Table 4.2 Ethnic composition by household

<table>
<thead>
<tr>
<th>Ethnic/caste gr.</th>
<th>Pakhure (%)</th>
<th>Tallotigaun (%)</th>
<th>Upallotigaun (%)</th>
<th>Arukharka (%)</th>
<th>Total users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brahman/Chhetri</td>
<td>38 (36)</td>
<td>89 (45)</td>
<td>67 (50)</td>
<td>77 (50)</td>
<td>271 (46)</td>
</tr>
<tr>
<td>Tamang</td>
<td>60 (57)</td>
<td>79 (40)</td>
<td>68 (50)</td>
<td>70 (45)</td>
<td>277 (47)</td>
</tr>
<tr>
<td>Newar</td>
<td>7 (7)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>7 (1)</td>
</tr>
<tr>
<td>Kami/Damai</td>
<td>0 (0)</td>
<td>16 (8)</td>
<td>0 (0)</td>
<td>8 (5)</td>
<td>24 (4)</td>
</tr>
<tr>
<td>Gharti/Magar</td>
<td>0 (0)</td>
<td>14 (7)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>14 (2)</td>
</tr>
<tr>
<td>Total</td>
<td>105 (100)</td>
<td>198 (100)</td>
<td>135 (100)</td>
<td>155 (100)</td>
<td>593 (100)</td>
</tr>
</tbody>
</table>

Table 4.2 is based on the information given by local people and panchayat officials met during the field work. Table 4.3 presents the ethnic composition of the households actually contacted during the field work. Out of 438 households in the three villages studied, 121 (27.6%) were contacted, and these had roughly the same ethnic proportions as the totals, except for the Gharti/Magar group, which could not be contacted.

Table 4.3 Ethnic composition by household contacted

<table>
<thead>
<tr>
<th>Ethnic/caste gr.</th>
<th>Pakhure (%)</th>
<th>Tallotigaun (%)</th>
<th>Upallotigaun (%)</th>
<th>Total users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brahman/Chhetri</td>
<td>18 (53)</td>
<td>13 (48)</td>
<td>17 (28)</td>
<td>48 (40)</td>
</tr>
<tr>
<td>Tamang</td>
<td>13 (38)</td>
<td>11 (41)</td>
<td>43 (72)</td>
<td>67 (55)</td>
</tr>
<tr>
<td>Newar</td>
<td>3 (9)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>3 (2.5)</td>
</tr>
<tr>
<td>Kami/Damai</td>
<td>0 (0)</td>
<td>3 (11)</td>
<td>0 (0)</td>
<td>3 (2.5)</td>
</tr>
<tr>
<td>Total</td>
<td>34 (100)</td>
<td>27 (100)</td>
<td>60 (100)</td>
<td>121 (100)</td>
</tr>
</tbody>
</table>

4.2.3 Demographic characteristics

4.2.3.1 Changes in population

There are no records or other reliable information regarding the changes in population in the study area, so I have had to rely on the best information available from questioning. No information could be collected
to cover all the ethnic and caste groups. A document prepared in 1881 reveals the numbers of Tamang households at that time. A comparison could be made with the number of Tamang households found in 1990, assuming the family size remained the same (Table 4.4).

This does not consider the out-migrated population. But so far as the pressure on forest resources is concerned, the out-migrated population has no effect. In-migration is negligible. In the absence of evidence of different rates of population growth, the same rate could be applied to all the ethnic or caste groups of the area.

<table>
<thead>
<tr>
<th>Villages</th>
<th>Tamang household 1881</th>
<th>Tamang household 1990</th>
<th>Growth % (109 years)</th>
<th>Growth rate Annual³ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arukharka</td>
<td>14</td>
<td>70</td>
<td>400</td>
<td>1.49</td>
</tr>
<tr>
<td>Pakhure</td>
<td>13</td>
<td>60</td>
<td>361</td>
<td>1.41</td>
</tr>
<tr>
<td>Tallotigaun</td>
<td>13</td>
<td>79</td>
<td>508</td>
<td>1.67</td>
</tr>
<tr>
<td>Upallotigaun</td>
<td>13</td>
<td>68</td>
<td>423</td>
<td>1.53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>53</strong></td>
<td><strong>277</strong></td>
<td><strong>423</strong></td>
<td><strong>1.53</strong></td>
</tr>
</tbody>
</table>

4.2.3.2 Household heads

The household head has a vital role in making decisions on household matters as well as in community affairs. However the role of other members in executing any field-level activity should not be underestimated. It was not possible to collect comprehensive information on this aspect which would need a much longer period of study. Age and sex of user household heads is presented in Table 4.5.

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1 During field work a document was found with Mr Hem Bahadur Lama of Madanpur, and I obtained a photocopy with his consent. This is an order issued by Prime Minister Ranodip Singh Rana on *Baishakh* 9, 1938 (April 1881) to the officer-in-charge of militia in West No.1 district regarding the *gol* obligation. The document lists the numbers of Tamang households in 79 villages of West No 1 district.

2 There is no record of in-migration for the period prior to 1971. In-migration is negative in both the 1971 and 1981 census in the central mountain region (NCP, 1984; HMG, 1987). The only possible in-migration could be from adjoining villages, which is also not prevalent in the rural areas.

3 Population growth rate (r) is calculated, in this thesis, by using the formula

\[
    r = \left[ \text{antilog} \left( \frac{\log p_t - \log p_0}{n} \right) \right] - 1,
\]

where \( p_t \) = number of households in 1990, \( p_0 \) = no. of households in 1881 and \( n \) = no. of years, i.e. 109 years in this case.
Table 4.5 Age and sex of household heads

<table>
<thead>
<tr>
<th>Age group</th>
<th>20-30</th>
<th>30-40</th>
<th>40-50</th>
<th>50-60</th>
<th>60-70</th>
<th>70-80</th>
<th>80-90</th>
<th>&gt;90</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>14</td>
<td>21</td>
<td>23</td>
<td>19</td>
<td>21</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>112</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>25</td>
<td>23</td>
<td>20</td>
<td>23</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>121</td>
</tr>
</tbody>
</table>

4.2.3.3 Family size

Family size among the users varied from 1 to 17. The highest family size was in the Tamang community; the lowest was in the Tamang and Brahman/Chhetri communities. However the maximum size of a Brahman/Chhetri family was 14. The family size of Kami/Damai and Newar communities varied from 4 to 9, and from 4 to 8 respectively. The over-all picture of family size among the users is given in Table 4.6.

Table 4.6 Family size

<table>
<thead>
<tr>
<th></th>
<th>Pakhure</th>
<th>Tallotigaun</th>
<th>Upallotigaun</th>
<th>All users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.03</td>
<td>6.14</td>
<td>5.80</td>
<td>6.27</td>
</tr>
<tr>
<td>Std. dev.1</td>
<td>2.55</td>
<td>3.49</td>
<td>2.79</td>
<td>2.94</td>
</tr>
</tbody>
</table>

4.2.3.4 Numbers of school-children

Out of the households contacted, 89 children were going to school. About 12% of the total population attend school. There is one primary school in Pakhure which is very recently established, and there is one middle school in Tallotigaun.

4.2.4 Landholding

Though the landholding situation may vary from place to place, most of the households own land. Out of the 121 households contacted, only three were landless. Among these three, one household was Damai and the other two were Brahman. The distribution of landholding by types among the households contacted is given in Table 4.7.

Total landholding figures do not differ much among the different groups of users, but the type of land differs with the different hamlets, due mainly to the elevation and partly to the slope. Pakhure and Upallotigaun

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1 Standard deviation (Std. dev.) is given here and elsewhere in the thesis to give some indication of variation within the user groups and between the three cases studied.
have more or less the same elevation and slope whereas Tallotigaun is situated at a lower elevation and gentler slope. This has resulted in the higher *khet* landholding with the lowland residents and higher *pakho* landholding with the highland residents. Though the landholding size has variation among the users, it is highest among the users at Pakhure.

### Table 4.7 Landholding per household (in *ropani*)

<table>
<thead>
<tr>
<th>Villages</th>
<th><em>Khet</em></th>
<th><em>Pakho</em></th>
<th><em>Kharbari</em></th>
<th><em>Gharbari</em></th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakhure</td>
<td>Mean</td>
<td>4.42</td>
<td>12.62</td>
<td>0.76</td>
<td>6.89</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>12.81</td>
<td>19.27</td>
<td>4.60</td>
<td>5.81</td>
<td></td>
</tr>
<tr>
<td>Tallotigaun</td>
<td>Mean</td>
<td>13.08</td>
<td>5.93</td>
<td>1.45</td>
<td>7.54</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>17.97</td>
<td>8.48</td>
<td>4.24</td>
<td>7.61</td>
<td>0.00</td>
</tr>
<tr>
<td>Upallotigaun</td>
<td>Mean</td>
<td>3.53</td>
<td>12.65</td>
<td>2.28</td>
<td>6.70</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>5.59</td>
<td>11.74</td>
<td>7.33</td>
<td>6.19</td>
<td>0.00</td>
</tr>
<tr>
<td>All users</td>
<td>Mean</td>
<td>6.02</td>
<td>11.19</td>
<td>1.68</td>
<td>7.00</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>13.03</td>
<td>13.89</td>
<td>6.34</td>
<td>6.41</td>
<td></td>
</tr>
</tbody>
</table>

### 4.2.5 Animal husbandry

As in the other parts of this region, animal husbandry forms an integral part of the livelihood of the local population. It is secondary to farming for those who have reasonably large landholdings, but it is the primary occupation of those who own little or no land.

Types of livestock vary with natural and socio-economic conditions. Altitude and terrain are among the natural factors. Generally, buffaloes are found at the lower altitudes and in comparatively low slope areas. Ethnic/caste group and economic status are the dominating social factors. Traditionally, Brahman/Chhetri do not maintain pigs. Large land-owners necessarily maintain oxen; also households which have more male workers maintain oxen, which increases their employment opportunities during the planting season. The availability of fodder, which is related to the landholding situation and the management norms for communal fodder resources, is vital in controlling the number of livestock.
Table 4.8 Livestock kept by the households contacted

<table>
<thead>
<tr>
<th>Village</th>
<th>Buffaloes</th>
<th>Cows</th>
<th>Oxen</th>
<th>Goats/sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakhure</td>
<td>2.15</td>
<td>1.15</td>
<td>1.38</td>
<td>3.68</td>
</tr>
<tr>
<td></td>
<td>1.14</td>
<td>1.39</td>
<td>0.83</td>
<td>2.47</td>
</tr>
<tr>
<td>Tallotigaun</td>
<td>2.04</td>
<td>1.61</td>
<td>0.82</td>
<td>2.18</td>
</tr>
<tr>
<td></td>
<td>2.17</td>
<td>2.39</td>
<td>1.34</td>
<td>3.53</td>
</tr>
<tr>
<td>Upallotigaun</td>
<td>1.55</td>
<td>1.40</td>
<td>1.15</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>1.07</td>
<td>1.49</td>
<td>0.82</td>
<td>2.09</td>
</tr>
<tr>
<td>All users</td>
<td>1.91</td>
<td>1.43</td>
<td>1.15</td>
<td>2.90</td>
</tr>
<tr>
<td></td>
<td>1.41</td>
<td>1.73</td>
<td>0.91</td>
<td>2.48</td>
</tr>
</tbody>
</table>

Table 4.8 shows the different types of livestock kept by the users. It reveals that for each type of livestock, variation within the households is greatest in Tallotigaun. Upallotigaun has fewer livestock than the average, and less variation. However, the differences are not significant for further analysis.

Feeding practice

People are turning towards stall feeding. This is the result both of changes in the local forest management norms and of lack of labour (partly due to increase in the number of school-going children) to go with livestock. The introduction of a winter crop and the need for more manure also contribute to this change in feeding practice. The number of households practising stall feeding has doubled during the last twenty years.

4.2.6 Dependence on forests

The aim of my study of the dependency on forests was not aimed to quantify but to investigate the major sources of supply of forest products. The quantities vary not only between the villages but also between the households. Furthermore, the required quantity of certain products has been found to be changeable, so that quantification at any particular time will have little validity. Therefore those households most dependent on particular sources are made the basis for studying this aspect. Particularly, a changing number of households using a certain forest or obtaining a certain forest products is taken to indicate the dependency on specific resource.
Table 4.9 Changes of sources for various forest products (by households)

<table>
<thead>
<tr>
<th>Products</th>
<th>Betini</th>
<th>Other Forests</th>
<th>Bari</th>
<th>Purchase</th>
<th>Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reported</td>
<td>Corrected</td>
<td>Reported</td>
<td>Corrected</td>
<td>Reported</td>
</tr>
<tr>
<td>Fuelwood 20 yrs ago</td>
<td>112</td>
<td>82</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>112</td>
<td>104</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Present</td>
<td>117</td>
<td>117</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Future</td>
<td>116</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Fodder 20 yrs ago</td>
<td>8</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>109</td>
</tr>
<tr>
<td>(For stall-feeding)</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>110</td>
</tr>
<tr>
<td>Present</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>111</td>
</tr>
<tr>
<td>Future</td>
<td>5</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>111</td>
</tr>
<tr>
<td>Grass 20 yrs ago</td>
<td>17</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>(thatching) 5 yrs ago</td>
<td>16</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Present</td>
<td>13</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>103</td>
</tr>
<tr>
<td>Timber Future</td>
<td>14</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>102</td>
</tr>
<tr>
<td>Fencing 20 yrs ago</td>
<td>12</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>10</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Present</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Future</td>
<td>8</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Leaf-litter 20 yrs ago</td>
<td>114</td>
<td>84</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>115</td>
<td>107</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Present</td>
<td>115</td>
<td>115</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Future</td>
<td>115</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Shed-poles 20 yrs ago</td>
<td>32</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>29</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Present</td>
<td>28</td>
<td>28</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Future</td>
<td>28</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>Jhikra 20 yrs ago</td>
<td>47</td>
<td>35</td>
<td>1</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>33</td>
<td>31</td>
<td>1</td>
<td>1</td>
<td>48</td>
</tr>
<tr>
<td>Present</td>
<td>23</td>
<td>23</td>
<td>1</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Future</td>
<td>22</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>62</td>
</tr>
<tr>
<td>Danda-Bhata 20 yrs ago</td>
<td>46</td>
<td>34</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>29</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Present</td>
<td>27</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Future</td>
<td>29</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Plate-leaves 20 yrs ago</td>
<td>3</td>
<td>2</td>
<td>84</td>
<td>62</td>
<td>0</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>3</td>
<td>3</td>
<td>84</td>
<td>78</td>
<td>0</td>
</tr>
<tr>
<td>Present</td>
<td>3</td>
<td>3</td>
<td>84</td>
<td>84</td>
<td>0</td>
</tr>
<tr>
<td>Future</td>
<td>3</td>
<td>-</td>
<td>84</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Tool-handles 20 yrs ago</td>
<td>82</td>
<td>60</td>
<td>18</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>93</td>
<td>86</td>
<td>8</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Present</td>
<td>94</td>
<td>94</td>
<td>7</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Future</td>
<td>94</td>
<td>-</td>
<td>7</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Halo 20 yrs ago</td>
<td>63</td>
<td>46</td>
<td>14</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>70</td>
<td>65</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Present</td>
<td>68</td>
<td>68</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Future</td>
<td>68</td>
<td>-</td>
<td>6</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Forest-grazing 20 yrs ago</td>
<td>42</td>
<td>31</td>
<td>4</td>
<td>3</td>
<td>n.a.</td>
</tr>
<tr>
<td>5 yrs ago</td>
<td>19</td>
<td>18</td>
<td>5</td>
<td>5</td>
<td>n.a.</td>
</tr>
<tr>
<td>Present</td>
<td>9</td>
<td>9</td>
<td>4</td>
<td>-</td>
<td>n.a.</td>
</tr>
<tr>
<td>Future</td>
<td>8</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
4.2.6.1 Dynamics of forest use

To assess changes in forest use over time, respondents were asked about their sources various forest products 20 years ago, 5 years ago, now (1990) and as expected in the future.

The collected data require some manipulation before they can be used because the number of households is now greater than in the past. To estimate more correctly the usage of past times, the reported values must be corrected for change in the number of households. The best estimate of the number of households in previous years corresponding to the number of households contacted in 1990 can be obtained using the population growth rate equation (see p.66) and are 121 (1.00) for 1990, 112 (0.927) for 1985 and 89 (0.736) for 1970.

In Table 4.9, the number of households using a particular source to obtain a forest product is given both as originally reported and as a 'corrected' value using the correction factors 0.927 and 0.736 for 5 years and 20 years ago respectively. The value for the future has not been corrected as it is improper to extrapolate forward past population growth rates.

From the corrected values in Table 4.9, it can be seen that more households obtain significantly more fuelwood, leaf litter, tool handles and ploughs (halo) from the forest but that less jhikra (supports for climbing plants) and danda-bhata (roofing poles, roughly squared) is obtained. Forest grazing has declined, paralleled by an increase in stall-feeding (corrected numbers of households being 26 (20 yr ago), 57 (5 yr ago) and 76 (present, i.e. 1990). A striking feature of the table is the increased use of private land, particularly bari, as a source of many tree products.

There is no basis for concluding that the sources have changed from one forest area to another, as no other forest is located as conveniently as Betini forest. This is also reflected in Table 4.9 and Figure 4.2. Thought the banpala-daskhat (Appendix II) reveals the existence of other forests in nearby areas, this was not so for the users of Betini. The degradation, if any, of other forests has no linkage with the protection of Betini forest. Except for a few households in the extreme west of Tigaun which use other forests for certain forest products, the use of Betini forest are only using other
forests (Tapu and Majuwa) to meet their needs of leaves for plates and red soil for house painting. Thus the protection effort implemented in Betini cannot have affected the other forests. Conversely, the improvement of Betini forest is not directly related to the degradation of other forests which certain studies (refer section 7.16) have revealed.

4.2.6.2 Dynamics in the use of forest products

There are no significant changes in the number of households using forest products. However the quantities used may have changed according to the availability of the products and labour, but this has not been studied. During the last twenty years changes have been made in using the following products.

(a) Leaf litter

The practice of collecting leaf litter from the forest floor seems, on the basis of discussion with older local people, to have been initiated very
recently. It has become so popular that most user households are now collecting leaf litter from Betini, primarily for use as bedding for livestock with the intention of making compost.

(b) Leaves for umbrellas

Local people used to make umbrellas out of bamboo/nigalo splits and leaves from the forests. But now, the use of leaves has been replaced by polythene sheets because of their availability and low price.

(c) Leaves for plates

The practice of collecting leaves for making plates can be put into two inter-related categories for religious purposes and for feeding the people during some functions. Generally functions are organised when there is a religious or other celebration. This practice has been reducing steadily. It varies with the caste; Brahman/Chhetri consume more and others consume less. Particularly in the wedding season (November to June) many village women are seen in the forests collecting leaves for this purpose. The leaves mostly used for this purpose are from Shorea robusta trees when they are available. As there are some Shorea robusta forests near Betini forest, the pressure on the latter from this type of use is negligible.

(d) Material for rope-making

The material for making rope, in the past, was Ischaemum angustifolium and some climbers such as Bouhinia spp. The historical document D3 shows that people used to collect Ischaemum angustifolium and supply it to the central authority. It was mainly used to make the rope needed for building scaffolds while erecting building and was also mixed with mud to make mortar. People used to get Ischaemum angustifolium either from their private land or from the forests.

Now, people feel that Ischaemum angustifolium has disappeared from the forests, so they are using other materials available from outside. To some extent the polythene which comes into the community as bags for fertiliser or insecticide is being used to make rope, and sometimes people are using nylon rope purchased from the market. This practice has increased the grass production on the private land and reduced the pressure, however small, from grass collection in the forests.
(e) Timber for dhiki:

Previously the *dhiki* was the only implement for dehusking rice. It used to be made out of timber. Though it could be used for quite a long time, it was essential for every household. With the recent development of installing mills, use of the *dhiki* has been reduced. Since the electrification of Tigaun, the mill has become cheaper and more popular. Since there is no mill in Pakhure, the Pakhure people go to the mill in Tigaun, a walk of one hour.

(e) Timber for making tauwa

A new practice has emerged for storing hay. Previously people used timber pillars to make haystacks above the ground, so that livestock could not reach the hay. But now the common practice is to just store it on the ground. Partly, it is the result of introduction of a winter crop in the field, because in the past people used to leave their livestock to stray in the fields after harvesting the summer crop (fields used to be without crop in those days). Furthermore, some of the local people expressed that the quantity of hay per household has reduced due to the decrease in landholding size and introduction of new variety of rice. Ultimately, it has reduced the use of timber in making *tauwa*.

(f) Grazing practice

The feeding of livestock has changed. Previously livestock were taken into the forests for grazing, but now they are usually stall fed. This change is the result of various factors- increase in the number of school children, decrease in livestock numbers and control of grazing in communal forest. However, some of the users expressed the intention of obtaining more manure by stall feeding.

4.3 HISTORY OF FOREST MANAGEMENT

4.3.1 Origin and evolution

As the name 'Betini' implies a forest containing mostly *bet* (*Calamus tenuis* family Palmaceae), the history of management of Betini forest is linked with the changing importance of *bet* in the central as well as local perspective. We can understand, on the basis of some old orders (D21, 26) that *bet* played a vital part in developing the transport system in the hills region. But the history of Betini forest is more than this. According to the local people, only *bet* from this forest was used to make the
Machchhendranath chariots. The tradition of displaying the Machchhendranath chariot was initiated in the time of Lichchhavi king Narendra Dev (middle of the 6th century). Thus the management of this forest, at least, on the part of the central authority could have been associated with that event. It is not certain whether the Lichchhavi king had any control over this area. However at some stage before unification the forest came under the control of guthi of Machchhendranath (at least this is the local understanding).

Management efforts are also reflected by an order (D9) issued in 1797, which furthermore, reinforces the evidence of the continuation of management efforts from earlier times. This order shows that the responsibility for management lay with the local people. The order also hints that local people's concern was the source of feed back to the central authority. However, other documentary evidence (D40) indicates that the forests of this area were protected under the general supervision of army officials. Inhabitants were strongly warned not to reclaim the forest areas, and there is no evidence that they ever did so.

When the lands around Belkot were allotted to chautariya as birta (Although D23 is not clear, local people supported the idea that this area was birta of chautariya, and D23 gives some hint of this.), a birta owner included this forest in his birta. However, the banpala-dashkhat (Appendix II) issued by the birta owner in 1904 resembles the provisions of the forest regulation (D89) issued in 1883 by the order of the Prime Minister to sadar-jangi-kotwali-thana regarding the employment of local functionaries as forest guards. The banpala-dashkhat made chitaidar, dware, thari and mijhar responsible for managing the forests. The penalties specified in the document were according to the provisions of the legal code of 1854.

On the other hand, on the basis of discussions with local people, Betini was managed as one of the aathban (eight forests) in Belkot mauja. The other forests of the aathban were Tapu, Shilapatra, Salghari, Khadkarepatle, Kafaldanda, Gorubas and Kamdhyanu. These forests were under the supervision of goswara. Clearing and cultivation were prohibited in them, but it is said that cutting of firewood and making charcoal were allowed. In addition to these forests, there were other small patches of forest (except in Betini area) which were managed extensively for household purposes.
Though there was no formal institution to manage the forests, all the people using the forest had united for management purposes by the end of first quarter of this century. Reports of forest damage were followed up through the initiatives of users, and local opinion became united whenever the forest was threatened. Particularly when the forest was burnt in 1938, there were several attempts to reclaim it, but all were discouraged by the local people. Local people were greatly encouraged when the goswara decided to restore as forest the land which had been reclaimed by some people.

In March 1961, the DFO of Trishuli division, comprising Rasuwa, Nuwakot and Dhading districts, gave a letter (Appendix III) to five residents of Tigaun and Pakhure, including the mukhiya of Tigaun, emphasising the need for forest protection in the area including Betini and Kafaldanda forests. This letter identified the following causes of destruction of forests under his jurisdiction, and these are also noted more recently (FSRO, 1977):

- slash and burn agriculture
- forest fires
- felling green trees
- cutting newly regenerated saplings
- uncontrolled grazing.

Betini forest has been regarded as common to all four villages - Pakhure, Tallotigaun, Upallotigaun, and Arukharka - from the very beginning. But after the panchayat system was introduced, conflicts over boundaries between the Madanpur and Belkot panchayats arose at panchayat level, but had no effect at user level. Though the people of Pakhure expressed the view that their forest protection efforts were initiated in 1951, they formed a forest management committee only in 1971.

In 1971, all the household heads of Pakhure village assembled for a picnic in the forest and proceeded to form a forest committee to manage Betini forest. The committee then agreed to protect the forest effectively by using only dead, dried, and rotten parts of the trees. As a watcher was employed locally on an ad hoc basis before, they felt it necessary to employ a full-time watcher to regulate these arrangements, even among the users from other villages i.e. Tallotigaun, Upallotigaun and Arukharka. A local person, who had been working as watcher since 1961, was appointed, his pay being 5 pathis of grain from each household annually. His authority was also supported by a letter issued by the village panchayat. The letter prohibited
the cutting of green trees. In 1987-88, the functioning of the watcher deteriorated, as he did not get the grain from all the households. The committee found some indiscriminate action within the forest and took steps to revitalise the system by organising a picnic and discussing the matter among users. The same committee is still functioning in Pakhure, and was awarded the *jara-juri*¹ award in 1989.

The people of Tigaun were also participating in the management of Betini forest. They employed a watcher from their own village or sometimes they contributed grain to the watcher employed by Pakhure village. More recently, when the committee of Pakhure received the *jara-juri* award, the people of Tigaun were annoyed, and they formed their own committee. They claim that the present committee had been functioning since 1972, but there are no other evidences of this. Nonetheless it was confirmed, through discussions with the people actually employed, that locally employed watchers were paid by contributions from the villagers.

Thus as at the time of my field work, two separate committees are functioning to manage the Betini forest. One represents the Tallotigaun, Upallotigaun and Arukharka villages and the other represents Pakhure village.

Presently one person from each of the villages of Pakhure, Tigaun (Upallo and Tallo), and Arukharka, is employed as a forest watcher. The watcher from Pakhure has been working since 1960, while the other two have only recently started. The watcher from Tigaun has changed frequently. Sometimes, the same watcher from Pakhure was working for both the villages. Before the appointment of the present watcher, five people from Tigaon worked as forest watcher.

Currently 105 households from Pakhure, 240 households from Tigaun, and 150 households from Arukharka are using this forest.

The watcher from Pakhure is paid annually 2 *pathis* of maize in August-September and 3 *pathis* of unhusked rice in November-December from each household of Pakhure village. Thus he is paid by 105 households, whereas the watchers from Tigaun and Arukharka are paid by 240 and 150 households respectively at the same rate.

¹ *Jara-juri* is awarded (through a private committee and fund) annually in recognition of conservation initiatives at the community or grassroots level (Bhattarai, 1990)
Regarding how long forest management in Betini has been going on, the following table was drawn up from the information given by 113 out of 121 households during the household study.

Table 4.10 Initiation of management  
(People's perception)

<table>
<thead>
<tr>
<th>Village</th>
<th>&lt;5 yrs</th>
<th>5-20 yrs</th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
<th>&gt;50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pkhure</td>
<td>2</td>
<td>11</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Tallotigaun</td>
<td>0</td>
<td>8</td>
<td>14</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Upallotigaun</td>
<td>4</td>
<td>25</td>
<td>20</td>
<td>5</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>All Users</td>
<td>6</td>
<td>44</td>
<td>42</td>
<td>8</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

Though the people have very different interpretations regarding the initiation of management, it is clear that management practices have existed over many years.

4.3.2 Ownership and tenure

The royal order of 1797 (D9) does not spell out the ownership or land tenure of Betini forest. But since the amalidar usually had to implement the government orders, it can be assumed that the forest was under the ownership of the government at that time. So far as privilege is concerned, there were no favours to any groups of people.

On the basis of the order issued by the chautariya in 1904 (Appendix II) and statements made by a very few people during the field study, the forest may have been under birta tenure, but the rest of the evidence suggests that it was under government ownership.

On the basis of information collected in the field, no group of people has any privileges regarding use of Betini forest, but all use it under locally developed norms. No one has so far claimed the ownership and privileges in the forest.

4.3.3 Objectives of forest management

Section 4.3.1 indicates that management was initiated to sustain the supply of bet required for the Machchhendranath chariots. Thus the management efforts were directed to preserve cane, i.e. Calamus tenuis. However the management of bet also required the preservation of trees. The
order of 1797 (D9) only prohibited cutting of trees and canes, but it hints that the people were using the forest for other purposes

The banpala-daskhat of 1904 (Appendix II) shows different objectives from the above. By then the use of bet from Betini to make Machchhendranath chariots had ceased, so production of bet was unnecessary. All the provisions in this order concerned the protection of green trees, except one which regulated game hunting by the birta owner. However the objective of supplying forest products for the local need without damaging the green trees was clearly indicated in the order. The order did not set out to limit the supply of forest products to the local people but rather support an increase in the supply from the forests.

Thus, whatever objectives were set in the orders issued from outside authorities, the main objective was to manage Betini forest in the interests of the local people. There is no evidence either of supplying forest products to outsiders or of issuing permits by any outside authorities.

4.3.4 Management practices

The codes of practice focused on regeneration, harvesting, utilisation and distribution of the forest products. The practices in Betini forest are intended to sustain biological growth. Interference to the growth of trees is to be minimised, as is reflected by the prohibition against cutting green trees, including branches. This prohibition is executed through the communal understanding, reporting to the authority, and employing watchers.

Throughout the whole period, the assumptions have been that the prohibition against cutting green trees would ensure the growth of the forests and establishment of regeneration. However collecting leaf-litter from the ground is accepted as a silvicultural operation to protect the forest from fire and induce the growth of grass. The regular cutting of grasses also increases the grass production. Most of the users have felt that the prohibition on cutting green trees has increased the quantity of dry branches and twigs, grass, and leaf-litter in the forest.

---

1 Although nothing is mentioned in D9 regarding the use of other forest products, they are mentioned elsewhere (D22). So it may be that the forest products not prohibited by the order were regulated in Betini.
2 Local people said that the practice of collecting bet from Betini ceased when it was transplanted in Hatiban of Nagarjun, a western part of the ring of hills surrounding Kathmandu valley.
Nonetheless the needs of the local people for green trees have been fully recognised. They are supplied in a regulated manner but again on a sound silvicultural basis. To affect the growth as little as possible, the following are the norms for extracting green trees.

i. Only stunted and crooked trees are to be taken unless the requirement is for clear bole.

ii. Extractions are made so as to maintain equal gaps between trees.

The system of distribution seems very simple. There is no regulation of the use of dead and dry twigs, branches or grasses. The only restriction is on cutting green trees. Grazing is totally prohibited. These norms have been well accepted. They are based on the end use of the products irrespective of socio-economic status. Sale of the forest products from Betini is fully prohibited except for fruits.

On the basis of the information collected through the household study, all people, irrespective of their economic, ethnic, and social status, are using Betini forest under the local rules and understanding. As the norms are widely respected and the costs of protection are shared, the system seems equitable, all the people contacted confirmed this.

4.3.5 Initiation and participation

The management of Betini forest has always been on local initiative (though local people expressed this, evidences for or against this statement are not enough regarding the initiation in the early days). Though the orders are issued in some instances from the centre, they are issued in the interest of local people. The changes in management practice have been made solely on the decision of local people.

Likewise management has been through local participation. The communication system also was developed by the users themselves. Whenever new arrangements were made, the information was circulated through the music played by local Damai.

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1 Betini forest is well known for fruits of *Myrica esculanta* and *Castanopsis* spp. Many local people are involved in collecting and selling fruits of *Castanopsis* spp. in October-November and *Myrica esculanta* in March-April. The chairman of Pakhure committee said that the total income from fruits could be around Rs 60,000 for the local people.
Participation of local people is highly encouraging. However, the recent award to Pakhure committee has brought forward some conflicts among the various groups of users of Betini forest. Previously there had been no controversy about the right to use the Betini forest, but the Tigaun people have since prompted their committee to question the present use rights situation. They found it quite disappointing when their efforts to manage the Betini forest were not recognised while an award was made to the Pakhure committee. Thus the award has helped raise issues of ownership, use rights, boundaries etc. which were never controversial in the past, and has caused factions to develop among the users/guardians of the forest. When Tigaun organised a general meeting of users, Pakhure people did not attend; similarly when Pakhure organised a general meeting, people from Tigaun did not attend. Previously management efforts were initiated jointly (Appendix IV), but since this event, two parallel and separate committees are functioning to manage the Betini forest. The outcome of the award, though aimed to encourage, does not look positive for the overall future management of the Betini forest.

4.3.6 Inputs for the management

The inputs for the management of Betini forest have come from the mobilisation of local resources. Throughout the whole period there have been no other resources involved in the management of the forest. In former times the understanding and information systems among the users were sufficient to manage the forest, whereas now local resources, such as grain and cash contributions, are being collected from among the users to use as payment to watchers.

4.3.7 System for resolving conflicts

There are two tiers of the conflict resolution system. The lower one involves decision-making by the user groups. Their decisions have no legal standing but are recognised and usually respected by all the members. The upper tier involves the system of government, whose rules have to be obeyed by every citizen of the country. The upper tier is accepted for purposes of appealing against decisions made at the local level and taking action against offender disobeying local decisions.
The following observations support these arguments.

1. Around 1933, some people from Tallotigaun attempted to clear and reclaim the Betini forest but could not succeed because of Pakhure efforts to protect it.

2. In 1937, seventeen people were fined Rs 5 each by the West No. 1 goswara for cutting green trees.

3. Around 1940, some people applied to reclaim an area for cultivation, but the villagers united to prevent this and were successful.

4. In the late 1940s, a resident of Pakhure planted millet in burnt patches of the forest, but the people of all four villages sent their livestock to graze that crop and then filed a case with West No. 1 goswara which concluded with the area being retained as forest.

5. In the middle of the 1960s, an outsider (most probably an Indian citizen) proposed to develop the area as a tea garden and approached the DFO at Trishuli. Staff of the DFO came to investigate the proposal but the villagers successfully opposed the proposal by expressing their opinions in writing as witnesses before the DFO.

6. Some people of Tigaun started quarrying slate inside the forest but the watcher from Pakhure confiscated their implements.

7. About eight years ago, three people were caught cutting trees without any sanction. They were taken to the range office because they had used force when challenged about their infringement. There is no further evidence of such activities.

8. In 1978, a resident of Tigaun was found cutting 140 rafters (bhata). He was regarded as doing this for a commercial purpose and was exerting force. He was taken off to Thansing range office.

Though the decisions made by the authority in the last two cases are not known to the users, such events have not been repeated in the recent years.

4.3.8 Linkage to and effects of forest legislation

The management of Betini forest was well known and of interest to the central policy-makers before the Rana time because of the importance of bet for the Machchhendranath chariots. However the interest of the central
authority in protecting the forest from clearing for agricultural purposes can also be read in some of the orders issued (D40).

The forest was little affected by the progressive changes in the forest legislation after its first enactment in 1854, and the relation between local people and the forest remained much the same. However some orders appear to have been issued as part of legislative measures to protect forest in certain instances where the local institution had to request that governmental authority be used to keep the forest out of reach of people attempting to use the forest for individual purposes.

The royal order issued in 1797 (D9) reflects the forest management practices of that time, and it remained in force as the only management system until the legal code was enacted in 1854. The provisions of the forest legislation of 1854 preserved the intentions of the previous orders, and were made applicable to all forests in the country. One document (D40) exists which relates to orders giving army personnel responsibility for protecting the forests of the area.

When it became central policy to vest responsibility in local functionaries (D89, 100 and 101), arrangements were made in the case of Betini forest through the banpala-daskhat (Appendix II) issued by the chautariya in 1904.

At the time when clearing for cultivation was attempted in the late 1930s, the West No. 1 goswara supported protecting the forest by its judicial decisions against the offenders.

In most of the hills region, the Private Forest Nationalisation Act has affected the communal management of forest resources to some extent. But in the case of Betini, no instance of the use of that Act can be traced. Similarly the Forest Act 1961 and its subsequent amendments through various rules and regulations seem to have had no effect, except that it has been used as a tool to control forest offences when the offender goes beyond the norms developed at the local level.

4.3.9 Interference in the local management

So far there is no evidence of interference from political and administrative authorities in the local people's management of the Betini forest. On the contrary, the support of local management is shown by the orders of 1797 (D9), of 1904 (Appendix II), of 1937 (refer 2 under section 4.3.7),
of the 1940s (e.g. case 4 under section 4.3.7), of 1961 (Appendix III), and recently (e.g. cases 7 and 8 under section 4.3.7). The following case further attests the recognition of local management by the authorities.

In 1981-82, DFO staff intended to demarcate the forest for development under the Rasuwa-Nuwakot Integrated Rural Development Project. Local people approached the office with an application (Appendix IV) to have the legal status of the forest explained to them. They mentioned that local participation in management could disappear if the demarcation by the forestry office went ahead. This intervention by the local people was fully respected and no further attempts were made to include Betini forest in forestry sector development activities in the district.

4.3.10 Effects of development activities

Betini forest is easily accessible by the all-weather sealed road between Kathmandu and Trishuli¹, the district headquarters. After the construction of roads early in the 1960s, enormous infra-structural development activities, which have affected the forestry resources, have been carried out in the district. But so far as Betini forest is concerned, few effects could be traced except for the damage caused by the construction of the road through the forest.

One indirect effect of development activities occurred after the completion of a farm irrigation project in Tallotigaun. Before the construction of the irrigation channel, it was not easy for the residents of the lower part of Tallotigaun to reach to Betini forest, but now they can use the trail along the channel edge wall. Thus the number of users of the forest has increased (in addition to the increase in population of traditional users).

4.4 PRESENT STATUS OF THE FOREST

The status of the forest needs to be assessed on the basis of the perceptions of the users rather than on an inventory of the numbers and sizes of trees. People evaluate a forest in the context of their needs and the extent to which they can be met from the particular forest. While assessing the forest in the present study, it was not intended to put the responses of the local people in some specific group but was left open. However, later, it became possible to categorise all the responses for Betini forest as shown in Table 4.11.

¹ Bidur is actually the district headquarters, but it is normally spoken of as Trishuli, which is a very old market town situated on the banks of the Trishuli river.
Table 4.11 Changes in condition of the forest  
(People’s perception - number of households)

<table>
<thead>
<tr>
<th>Village</th>
<th>Improved</th>
<th>Degraded</th>
<th>No change</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakhure</td>
<td>26</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Tallotigaun</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Upallotigaun</td>
<td>47</td>
<td>0</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>All users</td>
<td>99</td>
<td>0</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

People who regard the forest as having improved have expressed their perception in the following ways:

1. Forest is improved.
2. Now it is easy to use.
3. Forest is managed under controlled use.
4. Trees have been grown to bigger size.
5. More dead and dry products are available in the forest.
6. Forest has became denser than before.
7. Greenery has increased in the forest.
8. A greater variety of forest products are available now in the forest.
9. Water flow has been increased in the streams.

Though the forest is not degraded so far as the people’s general needs are concerned, a local person who is involved in providing medicine made from herbs from Betini forest considered it to be degraded because of the disappearance of some of the medicinal herbs, namely: *Saxifraga ligulata, Calamus tenuis, Cinnamomum tamala, Daphne canabina, Rhus semialata, Lobelia pyramidalis* etc. He feels the main causes of this were a forest fire in the 1940s and the increase in the practice of grass cutting on the forest floor. Local people also mentioned the disappearance of deer, which were seen in the forest in the old days.

The disappearance of *Calamus tenuis (bet)* from the forest means that the name ‘Betini’, which was given because of the abundance of *bet* is no longer justified. This evidence further supports the disappearance of some other species from the forest, as indicated in previous paragraph.

The general appearance of Betini forest is shown in Plates 4.1 and 4.2.
4.5 EFFECTS OF FOREST CONSERVATION

In addition to the sustained supply of forest products for the increasing population, local people have noticed the sustained flow of water throughout the year in the streams originating in this forest. This is evidenced by the increase in the use of water through the development of irrigation channels.

4.6 CONCLUSION

The management of Betini forest has continued unbroken since its initiation at least two centuries ago, but has been dynamic in nature. Though the forest is located in an accessible area which is being continually affected by development projects, it is still being managed without the influence of industrial or Western forestry knowledge. The changes in socio-economic condition cannot be distinguished from the other adjoining areas. Population growth has not affected the stability of this forest. Although a management plan for the district cast doubt on the capacity of the forests (of the district) to supply products to meet the local demand when estimated on the basis of sustained supply in perpetuity (FSRO, 1977), Betini forest is highly stable and can meet the demands of the increasing population sustainably under the local management system.
PLATE 4.1 Betini forest observed from Pakhure

PLATE 4.2 Betini forest observed from the lowest part of Pakhure
5. FORESTRY AT THE LOCAL LEVEL

III: THE KAMANG FOREST

5.1 THE FOREST

5.1.1 Location

Kamang is a forest located on the southern slope of Pheda-danda in Dolakha district and falls within the boundaries of the former Bhusapheda panchayat. The forest lies between the lek and the besi of Bhusapheda village. Other forests on the same slope of Pheda-danda are known as Bhaunsatpa, Khodekpa, Gombodanda, and Uttardanda forests, while Langthapa, Tarevir, Barapaile, Takuravir, Sana-majuwa, Gorlang and Majuwa are other forests in the area.

Before the introduction of the panchayat system, Pheda (also known as Bekhpheda) was a village under the Kabhrepalanchok ilaka of East No. 1 district. During the early period of the panchayat system, Bhusapheda was a village panchayat in Kabhrepalanchok district till 1974, when changes in the district boundaries for the election after the second Constitutional amendment resulted in its shift to Dolakha district¹.

The shape of Bhusapheda panchayat at the end of panchayat system is shown in Figure 5.1. However, as stated earlier, it is now the village development board.

Bhusapheda is not immediately accessible by any modern transport system of the country. The nearest road access is Mude, which is 107 km north-east of Kathmandu and 27 km from Lamosangu on the Lamosangu-Jiri road. Bhusapheda is a one-hour walk towards the south from Mude.

¹There is still controversy over the boundary with Thulo-dhading panchayat of Sindhupalchok district. Tandi village is allocated as one ward of Bhusa Pheda, but also as one ward of Thulo-dhading panchayat. Thus the people of Tandi are enrolled in two separate polling lists.
Figure 5.1 Kamang forest and surroundings
5.1.2 General land-use pattern

Table 5.1 Land-use pattern

<table>
<thead>
<tr>
<th>Land-use type</th>
<th>Nepal 000 ha(%)</th>
<th>Mid mountain 000 ha(%)</th>
<th>Central region 000 ha(%)</th>
<th>Dolakha 000 ha(%)</th>
<th>Specific area 000 ha(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural forest</td>
<td>5424 (37)</td>
<td>1762 (40)</td>
<td>1028 (37)</td>
<td>74 (35)</td>
<td>244 (22)</td>
</tr>
<tr>
<td>Plantation</td>
<td>69 (0)</td>
<td>30 (1)</td>
<td>29 (1)</td>
<td>03 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Enriched forest</td>
<td>25 (0)</td>
<td>19 (0)</td>
<td>6 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Degraded forest</td>
<td>706 (5)</td>
<td>404 (9)</td>
<td>238 (9)</td>
<td>20 (9)</td>
<td>226 (20)</td>
</tr>
<tr>
<td>Grassland</td>
<td>1745 (12)</td>
<td>278 (6)</td>
<td>138 (5)</td>
<td>34 (16)</td>
<td>279 (25)</td>
</tr>
<tr>
<td>Non-cult. inclusion</td>
<td>998 (7)</td>
<td>667 (15)</td>
<td>239 (9)</td>
<td>16 (7)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Farmland</td>
<td>3052 (21)</td>
<td>1223 (28)</td>
<td>818 (30)</td>
<td>29 (14)</td>
<td>359 (33)</td>
</tr>
<tr>
<td>Other land</td>
<td>2729 (19)</td>
<td>59 (1)</td>
<td>238 (9)</td>
<td>41 (19)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Total</td>
<td>14748 (100)</td>
<td>4442 (100)</td>
<td>2734 (100)</td>
<td>214 (100)</td>
<td>1108 (100)</td>
</tr>
</tbody>
</table>

Like Table 4.1, Table 5.1 shows the land-use pattern of the specific area and compares it with larger regional patterns. The specific area has a larger proportion of farmland, degraded forests and grassland than the district, but a smaller proportion of natural forest. However, the area has no land under the 'other' category, which constitutes nearly one fifth of the total area of the district.

The cadastral survey record prepared in 1977 provides the information for Table 5.2 on land use in Bhusapheda panchayat. Though the shape and size of the panchayat has changed since the compilation of these figures, the information still provides valid comparisons between and within different land uses.

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1 The sources of information are the same as for Table 4.1.
2 For this purpose area of former Bhusapheda village panchayat (including Tandi village) was selected as a sample.
3 More than 200 ha of plantation was established in Jiri by JMDP which was phased out in the early seventies. But this information is not in the land use summary prepared by LRMP.
4 This information was collected from Dolakha land revenue office during field work.
5 This information was collected from Dolakha Land Revenue Office in November 1989.
Table 5.2 Land use (areas in ropani)

<table>
<thead>
<tr>
<th>Ownership with quality</th>
<th>Khet</th>
<th>Pakho</th>
<th>Ailani</th>
<th>Forest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>964</td>
<td>10092</td>
<td>n.a</td>
<td>n.a</td>
<td>11956</td>
</tr>
<tr>
<td>i. abal</td>
<td>5</td>
<td>87</td>
<td>n.a</td>
<td>n.a</td>
<td>92</td>
</tr>
<tr>
<td>ii. doyam</td>
<td>325</td>
<td>1568</td>
<td>n.a</td>
<td>n.a</td>
<td>1893</td>
</tr>
<tr>
<td>iii. sim</td>
<td>592</td>
<td>8107</td>
<td>n.a</td>
<td>n.a</td>
<td>8699</td>
</tr>
<tr>
<td>iv. chahar</td>
<td>42</td>
<td>330</td>
<td>n.a</td>
<td>n.a</td>
<td>372</td>
</tr>
<tr>
<td>Government</td>
<td>n.a</td>
<td>n.a</td>
<td>461</td>
<td>17019</td>
<td>17480</td>
</tr>
<tr>
<td>Total</td>
<td>964</td>
<td>10092</td>
<td>461</td>
<td>17019</td>
<td>28536</td>
</tr>
</tbody>
</table>

% 3.4 35.4 1.6 59.6 100

5.1.3 General description of the forest

The composition of species at each altitudinal zone is shown in Table 5.3.

On the basis of the information in Table 5.3, the following are the key characteristics of the forest:

- The upper limit of Schima wallichii is 2140 m.
- The upper limit of Quercus lanuginosa is 2240 m.
- The lower limit of Quercus semecarpifolia is 2190 m.
- The altitudinal limits are 150 m lower in northern aspects than in southern aspects.

5.1.4 Forest type

According to the forest types of India (Champion and Seth, 1968), this forest seems close to the lower western Himalayan temperate forest, while the upper part of the forest resembles upper western Himalayan forest.

Stanton (1972) classified Quercus incana/Q. lanuginosa forest and Quercus semecarpifolia forest separately. On the basis of species composition, Kamang forest is a dry form of both types. But the interesting difference of Kamang forest from both of Stanton’s classifications is that Schima wallichii is present even in the top canopy up to 2150 m, and the two species of

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1 There is no separate category of forest land, but it comes under the general category of non-taxable land which includes rivers, roads, forests, irrigation channels, rock etc. But in the case of Bhusapheda, land other than forest in this category is negligible.

2 Stanton (1972) noted that Q. incana is confused with Q. lanuginosa in the east. King (1889 as quoted by Stanton), Kanai (1966 as quoted by Stanton) and Stanton (1972) have found these two species have some distinct features. The local names also have a very small difference as ban and banj. Thus broadly this forest comes under the west Himalayan temperate forest. Banj forest is not specifically included in the forest types of Champion and Seth (1968).
Quercus (Q. lanuginosa and Q. semecarpifolia) overlap between 2200 m and 2250 m. So to cover Kamang forest a separate classification of oak forest, under "Temperate broad-leaved forests" might be needed.

Table 5.3 Species composition of forests by altitudinal zone

<table>
<thead>
<tr>
<th>Altitudinal zone</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 m</td>
<td>Schima wallichii, Quercus lanuginosa, Eupatorium adenophorum</td>
</tr>
<tr>
<td>2100 m&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Daphniphyllum himalense, Alnus nepalensis, Eurya acuminata, Leucoceptrum canum, Symplocos ramosissima, Lyonia ovalifolia, Pyracantha crenulata, Rubica cordifolia, Eupatorium adenophorum, Dryopteris cochleata.</td>
</tr>
<tr>
<td>2110 m</td>
<td>Alnus nepalensis, Schima wallichii, Eupatorium adenophorum.</td>
</tr>
<tr>
<td>2140 m</td>
<td>Quercus lanuginosa, Schima wallichii, Rhododendron arboresum, Lyonia ovalifolia, Inula cappa, Berberis aristata, Phyllanthus parvifolius, Rubica cordifolia.</td>
</tr>
<tr>
<td>2190 m</td>
<td>Quercus semecarpifolia, Saurauria nepaulensis, Rhus wallichii, Rhus succedanea, Rhododendron arboresum, Lithocarpus elegans, Alnus nepalensis, Eupatorium adenophorum, Inula cappa, Viburnum coriaceum.</td>
</tr>
<tr>
<td>2240 m</td>
<td>Quercus lanuginosa, Q. semecarpifolia, Leucoceptrum canum, Daphniphyllum himalense, Machilus odoratisima, Rhododendron arboresum, Castanopsis spp., Ficus nemoralis, Alnus nepalensis, Michelia champaca, Pyracantha crenulata, Eurya acuminata, Rhus wallichii, Polygonum molle.</td>
</tr>
<tr>
<td>2240 m</td>
<td>Lyonia ovalifolia, Symplocos ramosissima, Quercus semecarpifolia, Q. lamellosa, Myrica esculenta, Daphniphyllum himalense, Rubus ellipticus, Rhododendron arboresum, Rhus wallichii, Pyracantha crenulata, Berberis aristata,</td>
</tr>
<tr>
<td>2480 m&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Quercus semecarpifolia, Lyonia ovalifolia, Symplocos ramosissima.</td>
</tr>
</tbody>
</table>

<sup>1</sup> This is information from Barapaile forest which is on the other hill but facing towards Kamang. So the aspect of Barapaile is north-west, exactly opposite to that of Kamang forest.

<sup>2</sup> This area is not in Kamang forest but at the top of Bhusa Pheda hill on the same aspect as Kamang.
5.1.5 General condition of the forest

The forest structure is two layers of tree species and one layer of shrubs, and the ground is mostly covered by grasses. *Quercus lanuginosa* is the dominant tree species in the forest, but *Alnus nepalensis* occurs in the gullies, *Daphniphyllum himalense* occurs in upper moist areas, and *Quercus semecarpifolia*, *Michelia champaca* and *Machilus odoratissima* are mixed in the upper part of the forest. Similarly, *Rhododendron arboreum*, *Schima wallichii*, *Lyonia ovalifolia*, *Rhus wallichii*, *Rhus succedanea*, *Lithocarpus elegans*, *Leucosceptrum canum*, and *Myrica esculenta* are in the secondary storey. Among the woody shrubs, *Inula cappa*, *Berberis aristata*, *Rubica cordifolia*, *Pyracantha crenulata*, *Eurya acuminata*, *Polygonum molle*, and *Rubus ellipticus* are dominant. *Eupatorium adenophorum* is another shrub which is present at all altitudes in the forest. Grasses have covered the forest area except where leaf litter is dense. However fern is also growing at the side of the water.

Stocking varies from 300 to 1100 trees per ha. The average diameter at breast height (dbh) and height of the dominating class of trees are 75 cm and 15 m respectively. However the average height of a pure patch of *Alnus nepalensis* was more than 20 m.

On the whole the regeneration was fair. Most of the regeneration is from coppice, but the regeneration of *Alnus nepalensis* is mostly from seeds. In the lower zone, the regeneration of *Schima wallichii* is profuse. Seedlings of *Quercus lanuginosa* can be observed in clusters where light is sufficient.

5.1.6 Forest use

Kamang forest is now being used intensively for collecting leaf-litter. Products such as firewood, grass, timber, fencing material, *jhikra*, and handles for implements are being extracted in a controlled manner. Forestry products for communal use, such as timber for a school or *ghyang*, are also taken from this forest. The general principle of use is to prohibit the cutting of green products as far as possible. There is no restriction on using the dry products.
5.2 FOREST USERS

The users of the forest can be grouped into two types: responsible users and casual users\(^1\). The former are those who not only use the forest but also are responsible for management. The latter are those who use the forest occasionally, informally and only for dead and fallen products particularly leaf-litter. The people of Multol are responsible users whereas people of Naiketol, Pata and Purangaun are casual users.

5.2.1 Settlement pattern

Settlements are confined to the uplands and are scattered all over the villages, although Naiketol and Purangaun villages are clustered. The settlement of Pata can be separated into two, a Tamang group in the upper part and a Kami group in the lower part of the village. The people of Multol and Naiketol live part of the year in goths which are located at about 2500 m.

5.2.2 Ethnic and caste composition

Tamangs are the dominant among the ethnic and caste groups in the panchayat. On the basis of discussions with some of the panchayat officials, caste composition was found to be as shown in Table 5.4.

<table>
<thead>
<tr>
<th>Ward no.</th>
<th>Ethnic /caste group</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Tamang 95%, Gharti 5%</td>
</tr>
<tr>
<td>3</td>
<td>Tamang</td>
</tr>
<tr>
<td>4</td>
<td>Tamang</td>
</tr>
<tr>
<td>5</td>
<td>Tamang 50%, Kami 40%, Chhetri 10%</td>
</tr>
<tr>
<td>6</td>
<td>Tamang 50% and Newar 50%</td>
</tr>
<tr>
<td>7</td>
<td>Magar 95%, Damai 3%, Tamang 2%</td>
</tr>
<tr>
<td>8</td>
<td>Newar</td>
</tr>
<tr>
<td>9</td>
<td>Tamang 50% and Newar 50%</td>
</tr>
</tbody>
</table>

Although the field work was concentrated on the users' settlements, some people of other villages (in wards 6 and 7) were contacted to collect responses regarding the management of Kamang forest. So the composition of ethnic and caste groups contacted during the field work is shown in Table 5.5 in which the people contacted in Chitre, Todke, Parsab and Khanigaun are grouped under 'non-users.'

\(^1\) Fisher et al. (1989) have established two broad categories, such as primary and secondary, on the basis of use rights. However I find it more appropriate to term them responsible and casual or user and other-user. All these users could come under primary users, as all of them use forest directly, without being involved in trade or processing of forest products.
Table 5.5 Ethnic/caste composition of households contacted

<table>
<thead>
<tr>
<th>Ethnic/caste group</th>
<th>Multol</th>
<th>Naiketol</th>
<th>Purangaun</th>
<th>Pata</th>
<th>Non-user</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamang</td>
<td>44</td>
<td>11</td>
<td>32</td>
<td>18</td>
<td>9</td>
<td>114</td>
</tr>
<tr>
<td>Chhetri</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Kami/Damai</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>24</td>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td>Newar</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Magar</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>24</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>11</td>
<td>32</td>
<td>48</td>
<td>48</td>
<td>183</td>
</tr>
</tbody>
</table>

5.2.3 Demographic characteristics

5.2.3.1 Population

The population of Bhusapheda panchayat in 1989 was given as 2993, of which 48 per cent were females (Anon., 1989). The overall literacy rate has been reported (ibid.) as 63 per cent, yet out of 404 children aged between 5 and 14, only 130 were attending school.

There was not enough information to study the population dynamics in the panchayat or among the users. But on the basis of some historical documents, a crude approach has been adopted to trace the trend of population growth among the users, using the following assumptions:

- *doke* denotes Tamang household only.
- the average family size remained the same.
- *rakam* obligations in the eastern hills and western hills were introduced in the same period (refer section 4.2.3.1).

Table 5.6 Changes in population

<table>
<thead>
<tr>
<th>Village</th>
<th>1881</th>
<th>1990</th>
<th>Growth rate (% p.a.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multol</td>
<td>19</td>
<td>60</td>
<td>1.06</td>
</tr>
<tr>
<td>Naiketol</td>
<td>10</td>
<td>29</td>
<td>0.98</td>
</tr>
<tr>
<td>Pata and Purangaun</td>
<td>18</td>
<td>58</td>
<td>1.08</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>147</td>
<td>1.05</td>
</tr>
</tbody>
</table>

5.2.3.2 Household characteristics

Household heads are mostly male; only 15 per cent were found to be female. As the information was collected through the household head, the age of the household head could help in gauging the authenticity of the oral history.
Table 5.7 Age of the household head

<table>
<thead>
<tr>
<th>Sex</th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
<th>50-60 yrs</th>
<th>60-70 yrs</th>
<th>70-80 yrs</th>
<th>80-90 yrs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>18</td>
<td>24</td>
<td>36</td>
<td>27</td>
<td>37</td>
<td>12</td>
<td>2</td>
<td>156</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>25</td>
<td>43</td>
<td>32</td>
<td>47</td>
<td>15</td>
<td>3</td>
<td>183</td>
</tr>
</tbody>
</table>

Table 5.8 gives the family size in the area, and shows it is not significantly different between users and non-users.

Table 5.8 Family size

<table>
<thead>
<tr>
<th>Village</th>
<th>Multol</th>
<th>Other users</th>
<th>Total users</th>
<th>Non-users</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.14</td>
<td>5.60</td>
<td>6.10</td>
<td>6.35</td>
<td>6.17</td>
</tr>
<tr>
<td>Std dev.</td>
<td>4.03</td>
<td>3.07</td>
<td>3.39</td>
<td>3.42</td>
<td>3.46</td>
</tr>
</tbody>
</table>

There is no record of out-migration. Only one household had migrated to Multol from Kabhrepanchok district. However the migration among the non-users was not investigated thoroughly.

5.2.4 Animal husbandry

Animal husbandry was the main occupation among the Tamang community of Bhusapheda. They formerly used to move from lek to besi in different seasons, according to the availability of fodder, but this system of moving with livestock persists in only a few households. The livestock are moved between lek and besi to fit in with the work on the farm. The system has almost disappeared because of the decrease in the population of livestock. The types and numbers of livestock shown in Table 5.9 give a general picture of the livestock husbandry system in the area.

Types and numbers of livestock varied with ethnic/caste group, which accounts for much of the variation between users, other-users and non-users. Almost all households contacted in the Newar community (which are all under the non-user category) had buffaloes - on average 2.18 per household - whereas only 2 out of 28 households of occupational castes (of which 24 are under other-users) had buffaloes (and then only 1 each on average).
Table 5.9 Types and numbers of livestock per household

<table>
<thead>
<tr>
<th>Village</th>
<th>Buffaloes</th>
<th>Cows</th>
<th>Oxen</th>
<th>Goat/sheep/pig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>Mean</td>
<td>0.52</td>
<td>1.45</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>1.89</td>
<td>2.33</td>
<td>0.67</td>
</tr>
<tr>
<td>Other-users</td>
<td>Mean</td>
<td>0.22</td>
<td>0.85</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>0.65</td>
<td>0.92</td>
<td>0.87</td>
</tr>
<tr>
<td>Total users</td>
<td>Mean</td>
<td>0.32</td>
<td>1.04</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>1.35</td>
<td>1.62</td>
<td>0.79</td>
</tr>
<tr>
<td>Non-users</td>
<td>Mean</td>
<td>0.94</td>
<td>0.73</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>1.15</td>
<td>0.85</td>
<td>0.50</td>
</tr>
<tr>
<td>Total</td>
<td>Mean</td>
<td>0.48</td>
<td>0.96</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>1.26</td>
<td>1.49</td>
<td>0.72</td>
</tr>
</tbody>
</table>

5.2.5 Landholding

The summary of landholding in the area, as presented in Table 5.10, is based on information given by the household heads. When providing this information people expressed the sizes of their landholdings in the traditional unit i.e. in *mana-pathi*, although they were already recorded in the standard unit of area the *ropani* by cadastral survey carried out in 1974. So it is not claimed that the figures in Table 5.10 are exact areas, but they are the best available in the circumstances and provide adequate comparisons of the landholdings.

From the data collected in the field work, Kami/Damai and Magar communities have the smallest landholdings, with an average 6.22 and 7.47 *ropani* respectively, whereas Tamangs, Newars and Chhetri have 12.83, 13.46 and 16.50 *ropani* respectively. Though Chhetri have the biggest landholdings in the study area, they form only a small proportion of the population, so the average landholdings among other-users and the non-users have been influenced by the landholding figures of Kami/Damai and Magar.

---

1 This is the traditional unit of expressing land size and people still use it with greater confidence. It is based on the quantity of seed required to cover the area. According to discussions with some of the people who had converted their land size into *ropani*, the conversion factor was 1 *ropani* to 4 *mana* of seed in the case of *khet* and 1 *ropani* to 2 *mana* in the case of *pakho, gharbari, kharbari* and other lands. Eight *mana* is one *pathi*. 
Table 5.10 Landholding per household (areas in ropani)

<table>
<thead>
<tr>
<th>Village</th>
<th>Khet</th>
<th>Pakho</th>
<th>Kharbari</th>
<th>Charbari</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users Mean</td>
<td>5.60</td>
<td>6.24</td>
<td>0.11</td>
<td>3.42</td>
<td>0.18</td>
<td>15.56</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>5.24</td>
<td>7.98</td>
<td>0.67</td>
<td>4.74</td>
<td>2.83</td>
<td>11.36</td>
</tr>
<tr>
<td>Other-users Mean</td>
<td>3.81</td>
<td>4.00</td>
<td>0.08</td>
<td>1.67</td>
<td>0.37</td>
<td>9.93</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>4.45</td>
<td>8.60</td>
<td>0.96</td>
<td>2.51</td>
<td>1.97</td>
<td>10.38</td>
</tr>
<tr>
<td>Total users Mean</td>
<td>4.39</td>
<td>4.73</td>
<td>0.09</td>
<td>2.24</td>
<td>0.31</td>
<td>11.76</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>4.78</td>
<td>8.32</td>
<td>0.86</td>
<td>3.51</td>
<td>2.02</td>
<td>10.99</td>
</tr>
<tr>
<td>Non-users Mean</td>
<td>0.93</td>
<td>5.03</td>
<td>0.03</td>
<td>3.92</td>
<td>0.00</td>
<td>9.91</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>2.03</td>
<td>6.34</td>
<td>4.41</td>
<td>0.00</td>
<td>9.37</td>
<td></td>
</tr>
<tr>
<td>Total Mean</td>
<td>3.49</td>
<td>4.81</td>
<td>0.07</td>
<td>2.68</td>
<td>0.23</td>
<td>11.27</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>4.60</td>
<td>7.76</td>
<td>0.82</td>
<td>3.84</td>
<td>2.02</td>
<td>10.60</td>
</tr>
</tbody>
</table>

5.2.6 Outside employment

There is very little opportunity for off-farm employment in the area. The only opportunity observed was employment as a nursery foreman or a forest watcher. The people employed locally would have the same effects on the local resources as other people, whereas the people employed or living most of the year out of the area would have different effects, as their involvement in utilisation and in management would be minimal. However, the livestock population has decreased drastically due to the shortage of labour caused by outside employment and by the increase in the number of children going to school. This has resulted in decreased pressure on the fodder resources. Though some people have always gone away for employment, their numbers have increased significantly in recent years. The situation at the time of the field study is presented in Table 5.11.

The different figures for outside employment between users, other-users and non-users are interesting, but the reason is still untraceable. The only difference that could be thought of was that the population of users was dominated by the Tamang community, whereas in other categories other ethnic/caste groups were more significant. Although the reason is still unknown, the Tamang people have more opportunities for employment in carpet factories in Kathmandu.
Table 5.11 Outside employment

<table>
<thead>
<tr>
<th>Village</th>
<th>Population covered</th>
<th>Employed-in Kathmandu</th>
<th>Employed in India</th>
<th>Total</th>
<th>Employed Outside %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multol</td>
<td>314</td>
<td>64</td>
<td>5</td>
<td>69</td>
<td>22</td>
</tr>
<tr>
<td>Other users</td>
<td>510</td>
<td>63</td>
<td>2</td>
<td>65</td>
<td>13</td>
</tr>
<tr>
<td>Total users</td>
<td>824</td>
<td>127</td>
<td>7</td>
<td>134</td>
<td>16</td>
</tr>
<tr>
<td>Non-users</td>
<td>305</td>
<td>8</td>
<td>3</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>1129</td>
<td>135</td>
<td>10</td>
<td>145</td>
<td>13</td>
</tr>
</tbody>
</table>

5.2.7 Dependence on forests

The dependence of local people on the forest resources is very complex. Their use of the forest varies from dry leaves to sound trees, grass collection to grazing land, soil and stone for building material to land clearing for cultivation. The supply of forest products has to meet not only individual and communal needs but also the demand for government construction within the villages, and outside the villages in a few instances.

During the discussions with people, it was found that they depended on all the forest products listed in the questionnaire (Appendix XV) to some extent, but those listed in Table 5.12 were the most important. As with Table 4.9, this Table shows to what extent households have depended on the forest area studied and on other sources for their requirements of the important products.

As in section 4.2.6.1 and Table 4.9, the values reported in interviews have been corrected to take account of the population increase (reflected in an increase in the number of households) since 1970. The correction factors are 1.0, 0.952 and 0.809 for 1990, 1985, and 1970 respectively.

Table 5.12 presents reported and corrected values for forest use. Although the use of forests as a source of fuelwood and leaf litter has increased significantly, the most striking change is in the use of private land, especially *bari*, as a source of most tree products. Forest grazing is little practised in Kamang forest itself but has, if anything, slightly increased with time in other nearby forests. As with Betini, the practise of stall-feeding (as a substitute for grazing) is increasing in Kamang (corrected values for 1970, 1985 and 1990 being 6, 13 and 16 respectively).
Table 5.12 Changes of sources for various forest products (by households)

(R - reported, C - corrected)

<table>
<thead>
<tr>
<th>Products</th>
<th>Period</th>
<th>Kamang</th>
<th>Other Forests</th>
<th>Bari</th>
<th>Purchase</th>
<th>Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R</td>
<td>C</td>
<td>R</td>
<td>C</td>
<td>R</td>
<td>C</td>
</tr>
<tr>
<td>Fuelwood</td>
<td>20 yrs ago</td>
<td>28</td>
<td>23</td>
<td>107</td>
<td>87</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>34</td>
<td>32</td>
<td>93</td>
<td>89</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>36</td>
<td>36</td>
<td>81</td>
<td>81</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>31</td>
<td>-</td>
<td>71</td>
<td>-</td>
<td>13</td>
</tr>
<tr>
<td>Fodder</td>
<td>20 yrs ago</td>
<td>20</td>
<td>16</td>
<td>64</td>
<td>52</td>
<td>13</td>
</tr>
<tr>
<td>(For stall-</td>
<td>5 yrs ago</td>
<td>19</td>
<td>18</td>
<td>59</td>
<td>56</td>
<td>17</td>
</tr>
<tr>
<td>feeding)</td>
<td>Present</td>
<td>12</td>
<td>12</td>
<td>60</td>
<td>60</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>10</td>
<td>-</td>
<td>55</td>
<td>-</td>
<td>23</td>
</tr>
<tr>
<td>Grass</td>
<td>20 yrs ago</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>64</td>
</tr>
<tr>
<td>(thatching)</td>
<td>5 yrs ago</td>
<td>8</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>5</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>68</td>
</tr>
<tr>
<td>Timber</td>
<td>20 yrs ago</td>
<td>19</td>
<td>15</td>
<td>31</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>17</td>
<td>16</td>
<td>24</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>11</td>
<td>11</td>
<td>14</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>12</td>
<td>-</td>
<td>11</td>
<td>-</td>
<td>45</td>
</tr>
<tr>
<td>Fencing</td>
<td>20 yrs ago</td>
<td>8</td>
<td>6</td>
<td>16</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>9</td>
<td>9</td>
<td>11</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>8</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>8</td>
<td>-</td>
<td>6</td>
<td>-</td>
<td>17</td>
</tr>
<tr>
<td>Leaf-litter</td>
<td>20 yrs ago</td>
<td>35</td>
<td>28</td>
<td>24</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>46</td>
<td>44</td>
<td>22</td>
<td>21</td>
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<td></td>
<td>Present</td>
<td>50</td>
<td>50</td>
<td>26</td>
<td>26</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>48</td>
<td>-</td>
<td>26</td>
<td>-</td>
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<tr>
<td>Shed-poles</td>
<td>20 yrs ago</td>
<td>25</td>
<td>20</td>
<td>70</td>
<td>57</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>21</td>
<td>20</td>
<td>67</td>
<td>64</td>
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<td></td>
<td>Present</td>
<td>19</td>
<td>14</td>
<td>65</td>
<td>65</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>17</td>
<td>-</td>
<td>59</td>
<td>-</td>
<td>13</td>
</tr>
<tr>
<td>Jhikra</td>
<td>20 yrs ago</td>
<td>31</td>
<td>25</td>
<td>88</td>
<td>71</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>34</td>
<td>32</td>
<td>62</td>
<td>59</td>
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<tr>
<td></td>
<td>Future</td>
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<td>-</td>
<td>18</td>
<td>-</td>
<td>84</td>
</tr>
<tr>
<td>Danda-Bhata</td>
<td>20 yrs ago</td>
<td>22</td>
<td>18</td>
<td>74</td>
<td>60</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>17</td>
<td>16</td>
<td>71</td>
<td>68</td>
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<td></td>
<td>Present</td>
<td>5</td>
<td>5</td>
<td>48</td>
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<td>46</td>
</tr>
<tr>
<td></td>
<td>Future</td>
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<td>-</td>
<td>40</td>
<td>-</td>
<td>59</td>
</tr>
<tr>
<td>Tool-handles</td>
<td>20 yrs ago</td>
<td>17</td>
<td>14</td>
<td>99</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>27</td>
<td>26</td>
<td>87</td>
<td>83</td>
<td>8</td>
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<tr>
<td></td>
<td>Present</td>
<td>40</td>
<td>40</td>
<td>67</td>
<td>67</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>36</td>
<td>-</td>
<td>61</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>Halo</td>
<td>20 yrs ago</td>
<td>6</td>
<td>5</td>
<td>59</td>
<td>48</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>17</td>
<td>16</td>
<td>42</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>14</td>
<td>14</td>
<td>43</td>
<td>43</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>13</td>
<td>-</td>
<td>29</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Forest grazing</td>
<td>20 yrs ago</td>
<td>6</td>
<td>5</td>
<td>87</td>
<td>70</td>
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<tr>
<td></td>
<td>5 yrs ago</td>
<td>3</td>
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<td>85</td>
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<tr>
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<td>2</td>
<td>2</td>
<td>84</td>
<td>84</td>
<td>n.a</td>
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<tr>
<td></td>
<td>Future</td>
<td>2</td>
<td>-</td>
<td>93</td>
<td>-</td>
<td>n.a</td>
</tr>
</tbody>
</table>
As the study was focused on the Kamang forest, I have not examined in any detail the use of other specific forests in the group. However I established that most of the users of other forests depend on Majuwa forest, which is quite big and was declared a government forest. This is because forests which they were using in the past could no longer meet their needs or probably because protection efforts have only been initiated recently.
5.2.8 Dynamics of the use of forest products

1. The main roofing material used in the study area, particularly in the upper villages was shingles till the late 1930s. But the forest which supplied the shingles was completely burnt in 1938, and it was difficult to collect them from other nearby forests, which by then were under systems of management by local people. Though there was some government forest, it was too far from the area. Thus the roofing material was changed to wheat straw, and by the middle of the 1950s, all households were using this material for roofing.

2. The practice of collection of leaf-litter is recent. Some people argued that while the livestock population per household was high there was plenty of manure for their land, but that when the livestock population came down a shortage of manure developed. The reason for reducing the livestock numbers was said to be the lack of manpower when the family members moved outside for employment.

3. Until the 1960s, people from other low altitude villages used to come with planks to exchange for potatoes. But after the panchayat system was introduced, this practice stopped and the local people had to meet their needs for planks from their own local forest.

4. The people of Bhusapheda formerly used to rely on people from other villages for the supply of leaves for making plates and umbrellas. People from Kathmandu used to bring the leaves from Dolalghat or Balefi1 and exchange them for potatoes. The exchange rate was two bundles of leaves for one pathi of potatoes at the time this practice ceased about 20 years ago, after polythene became available for umbrellas and manufactured plates for community purposes.

In the early 1960s, a collective decision was made to procure plates for each ward, each household contributing according to its paying capacity. At the moment there are about a hundred of these bikase-thal (developmental plates) in each ward, and whenever there is some celebration they are used instead of leaf plates. The plates which are still required for religious purposes are now made out of local trees.

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1 Dolalghat and Balefi are in Kavrepalanchok and Sindhupalchok district respectively
5. *Eupatorium adenophorum* is a wide-spread weed and it is known as *banmara* (forest killer). It is assumed that it appeared in the hills region just after a plague of locusts in the early 1950s. Though it has affected regeneration in the forests, it is now being used for various purposes as follows:
   a. It is used in the first layer of roofing and thus reduces the requirement for rafters.
   b. Recently, it is used for firewood.
   c. Nowadays it has became palatable to goats.
   d. It is used for compost.

6. *Arundinaria* spp. were not available nearby before, and people had to walk two days to buy *mandro* and *bhakari*, but now they are growing these plants on their own land.

7. For various reasons, grazing has been reduced.

5.3 HISTORY OF KAMANG FOREST

5.3.1 Land tenure

According to Mahat (1985), the area around Bhamarkot extending from the Sunkosi river to Bhusapheda was granted as *birta* to *kaji* Hariman Singh Basnet's family to compensate for their *birta* lands in Kaski which were taken away when Jung Bahadur Rana became maharaja of Kaski and Lamjung. Mahat noted that after the death of Hariman, the eastern part of this *birta*, including the whole of Bhusapheda except for Khanigaun, came into the possession of his son Lok Man Singh. The area was mortgaged to Phauda Singh and later it was sold to Juddha Shumshere. The receipt given to the *mijhar* against the clearance of tax on December 1889 shows that Bhusapheda was *bekh* of *kaji* Bala Ram Singh Basnet, so at some time it could have been transferred from Lok Man Singh Basnet. However this may be, it is clear that it was later transferred to Juddha Shumshere.

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1 But old people of Bhusapheda and the historical document relating to Bhusapheda indicate that the area was granted as *bekh*. Even the name "Bekh-Simle" given in the document (Mahat, 1985) denotes the area was under *bekh* tenure.

2 Adhikari families of Pata are descendants of an Adhikari father and a Tamang mother. An Adhikari Brahman came from Palanchok to collect the revenue for Juddha Shumshere from this village and adopted a Tamang girl as his wife. Now there are five households.
On the other hand, Khanigaun was raikar land from the time the copper mine was started. Magars were brought from the west and settled in the area allocated for the mine. They had to pay the rent of the land in copper. This rent was deposited in the account of 'Rani' (queen), so it was called 'raikar'.

5.3.2 Evolution of forest management

5.3.2.1 Allocation of forests to the villagers in the early Rana period

The land allocation consisted of crop land, pasture land and some forest land. Though crop land was allocated to individual families, the pasture land and forest were allocated to groups of people or hamlets. Thus the forests in Bhusapheda were allocated to a specific number of doke. Kamang forest was allocated to Multol, Langthapa to Naiketol and Sama-majuwa to Purangaun and Pata villages. The term doke signifies that the land was under rakam obligation. Though it is difficult to determine exactly when these allocations were made, it was either before the bekh was granted or before 1853.1

- On the other hand, a document (see the first footnote under section 4.3.2.1) was prepared in 1881, listing the number of Tamang households supplying charcoal in West No.1 district. The number of doke listed in the document indicated the number of households in the village.
- Thus from all this evidence it can be said that the forests were allocated, at the latest, by 1877, i.e. before the death of Jung Bahadur Rana.
- When this whole area was granted as bekh, the bekh-owner did not attempt to make changes in the land use. However the rents were fixed separately for different land uses.
- The legal code of 1854 recognised that any tree in the bekh land belonged to the bekh-owner, but did not allow him to cut such trees for commercial purposes.

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1 According to Regmi (1978), land under rakam obligation could be any class of land until 1853 but after that only raikar could be be allocated. It is not known exactly when the birta (or bekh) mentioned in the previous section was granted to Hariman Singh Basnet, but it must have been after 6 August 1856, the day Jung Bahadur became maharaja.
5.3.2.2 Local efforts to manage the forests in the late-Rana period

As their local forests were so important in the life of local people, they suffered greatly from forest degradation. One of the local *talukdars* realised the need for forest protection and also that effective protection activities could not be implemented unless both the people to whom the forests were allocated and the people from adjoining villages (i.e. possible or casual users) were involved. In May 1938, all households of Multol and representatives from adjoining villages assembled and produced a *gadpatra*¹ (Appendix V). This document also reveals that they had a local institution in the village comprising one *mul-pancha* (main *pancha*) and 8 other *pancha*. The document not only dealt with protection of the Kamang forest but with three other forests as well. Though there was no forest on *bekh* land allocated to the people of Khanigaun (who were *raikar* landholders) in the previous arrangement, the new arrangement included protection efforts in the forest adjoining that village.

The *talukdar* took the *gadpatra* to the district *goswara* in Chautara in order to get the *banpala-sanad* issued, but found that the presence and consent of the *jimmuwal* was also required. So both the *talukdar* and the *jimmuwal* submitted the application to the *goswara* in Chautara to bring the forest under *banpala-sanad*, but this application was not successful.

Again in May 1949, an application (with the consent of local people) to protect the Kamang forest was submitted to His Majesty by the local functionaries (Appendix VI). This was a necessary step in completing the formalities before a *banpala-sanad* for any forest could be issued².

Attempts to obtain a *banpala-sanad* for the protection of Kamang forest did not succeed before the end of the Rana period³, as is attested by an application submitted in 1954 (Appendix VII). No further efforts could be traced before the introduction of the *panchayat* system. Rather the enactments made during the Rana time were relaxed to some extent. In the mean time the *talukdar* who initiated the protection activities died, and no other people followed the previous efforts.

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¹ This was mentioned in Gautam (1986) as *gajapatra*, but *gathpatra*, for which *gadpatra* is the local pronunciation is more correct. It is a document setting out a consolidation of the opinions of the people concerned.

² This is clearly mentioned in the legal code after the amendment of 1923.

³ As the application (Appendix VII) is a humble request to issue a *sanad* for Kamang forest, it is clear that a *banpala-sanad* was not issued up to that time.
When the forests in the bekh area were allocated in 1938, the people of raikar felt it necessary to raise a forest on their own raikar land. One plot of land had been left common during allocation in the past. They all assembled and produced a gadpatra to raise a new forest in Chandithanpakha\(^1\) in May 1940.

5.3.2.3 Delineation of forests in early panchayat period

When the village panchayat was formed after the introduction of the panchayat system, forests were designated as either government or village forests. The village forests were even allocated to individual wards, whereas Majuwa was retained as government forest.

Though the wards have been changed since, the original allocations were as shown in Table 5.13.

Table 5.13 Allocation of forest to wards

<table>
<thead>
<tr>
<th>Previous ward</th>
<th>Present ward</th>
<th>Village</th>
<th>Forest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>Multol</td>
<td>Kamang</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>Jamsing</td>
<td>Gorlang</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Naiketol</td>
<td>Langthapa</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>Malighyang</td>
<td>Tarevir</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>Pasalgaun</td>
<td>Tarevir</td>
</tr>
<tr>
<td>6.</td>
<td>4</td>
<td>Purangaun</td>
<td>Barapaile</td>
</tr>
<tr>
<td>7.</td>
<td>7</td>
<td>Khanigaun</td>
<td>Takuravir</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>Pata</td>
<td>Sana-majuwa</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>Parsab</td>
<td>Linge-khola</td>
</tr>
</tbody>
</table>

Mostly these allocations were based on the traditional use rights and practices. In addition to these allocations chitaidars were appointed by some of the wards. Some wards appointed the chitaidar jointly, while others made arrangements for people to watch while walking to and from lek and besi. The job of chitaidar or watcher was not particularly difficult. Once he shouted, no one attempted to cut green trees.

The protection and regulation system through paid chitaidar did not continue for long in some wards. Each household should have contributed up to Rs 5 per year, but many households did not do so. So the chitaidar,

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\(^1\) Chandi is the name of a god. Than is place of a god or goddess. Pakha is barren and slopy land. So Chandithanpakha was the site within the boundary of land allocated for khani but was not allocated to any household. It was rather kept common as a religious site. Thus the new forest was created on on religious site. Unlike religious forests, the products of this forest are regulated under the norms developed by the local people. It is now known as Chandidanda.
who should have got about Rs 500 per annum if paid by every household, did not want to work if many households defaulted.

The protection of Kamang forest is different from the others. The people who live in Multol have their uplands just above the Kamang forest and to go there they walk through Kamang forest twice each day. So whoever walked through the forest became the supervisor of the forest and there was no need to pay a *chitaidar*. Everyone was observing the others. However there were a few isolated cases of indiscriminate action in the southern part by residents of Pata and Purangaun villages.

The efforts of the Kamang users not only protected and regulated their own forest products but they also encouraged people to initiate protection activities in other wards. People of wards 6 and 7 initiated the protection of their forest by closing the forest between May and November each year for certain purposes, through the music of local Damai (see Plate 5.1), and by fixing *tharo* (Plate 5.2) at every entry and exit point of the forests.

**5.3.2.4 Initiation of community forestry in the late panchayat period**

A community forestry programme\(^1\) was initiated in the *panchayat* by constructing a *panchayat* forest nursery in Chitre in 1983, and plantation activities were carried out in subsequent years. These activities encouraged the users of Kamang forest to expand their own area of forest in wards 2 and 4. So the people of ward 2 not only constructed a nursery in 1985 at Ghumaunepani, an area located just above the Kamang forest, but also proposed to plant an area, adjoining their upland and which they were claiming as their registered pasture land. By the end of fiscal year 1989-90, more than 50 ha were planted on former pasture land from this nursery. The nursery was convenient for planting in wards 2 and 4.

This was the first *panchayat* in the district to construct two nurseries under a community forestry programme. As there is no outside contribution to the cost of establishing village level nurseries in Dolakha, this was taken as revealing the willingness of the local people to participate in the programme, provided the nursery construction is justified.

The long history of forest management in the area, the operation of two nurseries in the same *panchayat* and substantial areas of forest plantation led the local people to form a forest committee in 1988. The

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\(^1\) Community forestry programmes in Dolakha were initiated in 1980-81 under the Integrated Hill Development Project, jointly funded by HMG and SATA.
committee is separate from the *panchayat* organisation and consists of people from Multol, Naiketol, Purangaun and Pata. The functions of the committee are monitoring the forestry works in the area, resolving conflicts and assisting in implementation of forestry activities (Appendix VIII).

5.3.3 Characteristics of the system

With the various phases of the forestry practices during the last five decades, a system has been evolved in the Kamang forest. The characteristics of the system cannot be identified from written documents or minutes etc, but only from the daily practice of the people. Some of its characteristics are embedded in their culture (e.g. even a child entering the forest does not attempt to cut green seedlings, poles or trees), and so it is difficult to document all these. However I have attempted to list the broader categories.

5.3.3.1 Access differs with forest products and periods

Access to Kamang forest varies according to the products to be collected. There is no control over the collection of dried and fallen twigs and branches or grass. For the collection of other controlled products, the period is fixed between November to May. Though the time to collect fallen and rotten products and grass from the forest is unregulated, this is controlled naturally, since not many people go to the forest in the period from June to November because at this time of the year:

(a) it is difficult to walk in the forest in the rainy season, as the soil is very loose;
(b) local people are engaged in agricultural activities;
(c) mostly grasses are available from their own land;
(d) the wet conditions make it a bad time to collect firewood; and
(e) leaf-litter is not available in the forest.

Thus the people mostly enter the forest during the period between late November and early May. Access with a *khukuri* is not permitted unless the individual is authorised to collect green branches or trees.

5.3.3.2 Forest products having controlled use

a. Timber for building

Timber is supplied only to build houses. One or two houses are built annually in a village. During the field work, only one house was observed
being built. The number of trees supplied for building a house varies from one to four, depending upon the size of the house and the trees. People reuse the old timbers as much as possible.

Local people do not use much furniture. The normal practice is to make furniture during the construction of a house, by using the same timber.

b. Jhikra

This is mostly required during the rainy season. It is used to support the climbing vegetables, and to make fencing each year. Branches are used for the former; thorny branches or shrubs are used for the latter. The number of branches for support vary from five to ten. The use of branches has been reduced since bamboo became available. The fencing material comes mostly from bushes, so its use is not restricted. These products are finally used as firewood during the crop harvesting period.

c. Handles for tools

Timber for handles for agricultural tools comes mostly from branches. Branches for this purpose can be collected from any part of the forest but only once a year. They cannot be collected from the important species of the trees. But nowadays, *Pyracantha crenulata* is mostly used, so people do not have to use tree branches so much for this purpose.

d. Timber for halo

Timber for not more than two halo can be collected from the forest each year. The timber needed for this purpose has to be not less than 1.2 m in both girth and length.

e. Ghocha and sata

These products, which are crucial, are required to make sheds for livestock. Such sheds are shifted in the crop land. For this purpose each household generally needs about fifty poles or branches which can be used for up to five years, and so are properly stored while not in use.

f. Musal

*Musal* is used to dehusk rice. Only the timber from the *Quercus lamellosa* tree is usable in this locality and even the people from other villages obtain it from Kamang forest. However its use is not frequent. Once made, the *musal* can be used for a couple of years.
5.3.3.3 Access rights

On the basis of documentary evidence (Appendices V, VI and VII) and locally institutionalised practice, only the inhabitants of Multol have rights to use Kamang forest. This is not only claimed by Multol people themselves but is equally respected by the people of adjoining villages. But it is strictly applied only in the case of the forestry products that have controlled uses. For products like grass and firewood, people from Naiketol, Pata and Purangaun can have access to a very limited extent; for products such as leaf-litter people from all the villages have free access.

5.3.3.4 Regeneration and reproduction of the forest

Kamang forest is being regenerated solely by natural means. Though the forest was found to be degraded in the early 1930s, the only treatment required to restore the forest was protection. The forest (being in the zone of oak) has regenerated by coppicing of native species.

5.3.3.5 Distribution and equity

There is no specific system of distribution of the forest products, nor are there any real problems. Harvesting, except for the controlled forest products, is not confined to any area or time. Most of these forest products are harvested on the basis of their availability and they are collected from all the forest all the time. Only the forest products that have to be obtained from green trees have to be notified to all the users. Generally, the building of new houses in the village is easily communicated throughout the village. This eventually reflects the need for some timber. Further, the people still cooperate in such works by working for each other.

The distribution system makes no distinctions on the basis of socio-economic status. However the Kami of Pata and Damai of Khanigaun are rather privileged groups. As their services are crucial to every household, they are allowed to collect the forest products from Kamang forest even though they are not the responsible users. A few instances were also noticed of the allocation of trees, in Kamang forest, to Kami for making charcoal, although they are not the users of Kamang.

5.3.3.6 Resolving the conflicts

Most conflicts are related to the illicit cutting of trees. There are three stages in resolving the conflicts.
• For the first offence, the offender is only cautioned and made to confess the offence.

• For the second offence, the offender’s cutting and felling implements are confiscated, which is an expensive punishment.

• After a third offence the offender is reported to the higher authority for legal action (Appendices VII and VIII). Once when some people of Pata illicitly felled trees in Kamang forest, the case was dealt with by the district goswara at Chautara, with the result that one of the offenders was imprisoned for six months.

5.3.3.7 Resistance to external interference

Interference by external authorities is minimal. Only a few years ago, three permits were issued by the District Forest Office to collect timber from Kamang forest. This only became known to the villagers when staff from the range office came to mark the trees. After discussion, the marking was done only for two of the permits, which were held by the users themselves. The third one was withdrawn as the person it had been granted to was not a user of this forest. That incident made the forestry office well aware of the local system of management in Kamang forest, and no further interference has occurred since.

5.3.3.8 Effects of development activities

There are not many development activities in the area. So far they have been confined to constructing a school building, and maintaining some ghyang and irrigation channels. Forest products are still used in the traditional way in these kinds of activities.

When the Lamosangu-Jiri road was being built, many people from the area were employed as labourers. Even people from the lower part of the panchayat used to go to work in the morning and return in the evening, and most of the family members were engaged. Since they did not have time to collect firewood from their own forests for their daily needs, they used to cut firewood from the forest adjoining the trail on their way home in evening. The Uttardanda forest became degraded for this reason. Although Uttardanda forest is located close to Multol, it is actually within

1 I could not ascertain why these two users approached the forestry office for permits in this case.
Thulodhading *panchayat*, and this could have encouraged the road workers to use it indiscriminately on their way home after work.

**5.3.4 Effects of forest protection**

The people of Bhusapheda have noticed the following changes since the initiation and implementation of protection activities in Kamang forest.

(a) Water in the streams has increased. Previously the *ghatta* ran only until the middle of December but now it stops only in late January.

(b) Leaf-litter is much more abundant.

(c) There are more dry branches for *jhikra* and firewood.

(d) The quantity of grass is reduced because of the leaf-litter.

On the whole the users, other-users and some non-users have expressed the opinion that the Kamang forest is improved. It is also clear that most of the users are confident of getting forest products from Kamang in future. The present situation of the forest is reflected in photographs taken during the field work (Plates 5.3 and 5.4)

**5.4 CONCLUSION**

The situation regarding usage of Kamang forest can be judged from Table 5.12. On the basis of the responses given by the local people, one can be confident that the management efforts to date have succeeded in achieving a stable forest. Local people are quite sure they will be able to use Kamang forest more in future.

The present state of Kamang forest is the result of local commitment and efforts. From the very beginning the local *talukdar* realised the need of local participation. But instead of using his authority he sought to achieve participation by common consent. Central authority has been involved only to safeguard and reinforce the local efforts.
PLATE 5.1 A group of local Damai with their music in the forest
(I met this group on 30 November 1989 at Chitre-dil while working for the Sana-Majuwa forest.)

PLATE 5.2 Local people fixing tharo
(This is done at every entry and exit point along with the music. Though it is only a small branch of a tree, it is recognised by all people going to the forest, irrespective of their age and sex. It has different meanings at different times and places, but local people can interpret the meaning according to the season and location.)
PLATE 5.3 Kamang forest as seen from Multol

PLATE 5.4 Kamang forest as seen from Chitre-dil
6. FORESTRY AT THE LOCAL LEVEL

IV: THE SALLEPAKHA FOREST

6.1 THE FOREST

6.1.1 Location

Sallepakha is the name used here for one of the forests around Melung village in Dolakha district, though it is also known as Pale-ban, Sanadiya-ban or Salleni-ban. The forest was under the taluki of Melung before the administrative arrangements introduced during the panchayat period. Before the reshaping of village panchayats in the early 1970s, the whole forest was within the territory of Melung panchayat, but at the end of panchayat system it was partly in Melung and partly in Dandakharka village panchayats, and is now under the respective village development boards.

After the unification, Melung became the major centre among the adjoining villages and became a strategic point for the central authority. In Rana times, Melung was the headquarters of a thum, and its district headquarters were in Ramechhap. In the year 1879, a jangi-pareth station was created, making Melung the centre of that area. In the panchayat period, Melung was one of the 54 village panchayats in Dolakha district. However its size and shape have often changed. For long times, a market (hat) has operated on Wednesday of every week.

Melung is not accessible by any means of modern transport. The nearest road access is from Tamakosi-pul on the Lamosangu-Jiri road, about 5-hr walk away. From Tamakosi-pul to Charikot, the district headquarters, by the sealed road the distance is 18 km, but it is about a 2-hr walk by a short-cut trail. Thus the area is located about 7 hr walking distance from the district headquarters. Sallepakha forest and its surroundings are shown in Figure 6.1.
Figure 6.1 Sallepakha forest and surroundings
6.1.2 General land-use pattern

As in the previous tables on land-use pattern (Tables 4.1 and 5.1), Table 6.1 shows the land-use pattern in Melung area and the national, regional and district land-use patterns for comparison. In this table the information presented under specific area is derived from many discussions, and that for the other levels comes from the same source as for Tables 4.1 and 5.1. The distinctive feature of this specific area is that it has 47% agricultural land, compared with only 14% for the whole district.

Table 6.1 Land-use pattern

<table>
<thead>
<tr>
<th>Land-use type</th>
<th>Nepal 000 ha (%)</th>
<th>Mid mountain 000 ha (%)</th>
<th>Central region 000 ha (%)</th>
<th>Dolakha district 000 ha (%)</th>
<th>Specific area 1 ha (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural forest</td>
<td>5424 (37)</td>
<td>1762 (40)</td>
<td>1028 (37)</td>
<td>74 (35)</td>
<td>423 (28)</td>
</tr>
<tr>
<td>Plantation</td>
<td>69 (0)</td>
<td>30 (1)</td>
<td>29 (1)</td>
<td>02 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Enriched forest</td>
<td>25 (0)</td>
<td>19 (0)</td>
<td>6 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Degraded forest</td>
<td>706 (5)</td>
<td>404 (9)</td>
<td>238 (9)</td>
<td>20 (9)</td>
<td>73 (5)</td>
</tr>
<tr>
<td>Grassland</td>
<td>1745 (12)</td>
<td>278 (6)</td>
<td>138 (5)</td>
<td>34 (16)</td>
<td>269 (18)</td>
</tr>
<tr>
<td>Non-cult. inclusion</td>
<td>998 (7)</td>
<td>667 (15)</td>
<td>239 (9)</td>
<td>16 (7)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Farmland</td>
<td>3052 (21)</td>
<td>1223 (28)</td>
<td>818 (30)</td>
<td>29 (14)</td>
<td>703 (47)</td>
</tr>
<tr>
<td>Other land</td>
<td>2729 (19)</td>
<td>59 (1)</td>
<td>238 (9)</td>
<td>41 (19)</td>
<td>27 (2)</td>
</tr>
<tr>
<td>Total</td>
<td>14748 (100)</td>
<td>4442 (100)</td>
<td>2734 (100)</td>
<td>214 (100)</td>
<td>1495 (100)</td>
</tr>
</tbody>
</table>

6.1.3 Forests in Melung area

The Sallepakha is the biggest forest (about 200 ha) in Melung area, and ranges from 950 m to 1500 m above mean sea level. The lowest part is in the Milti-khola, which is the furthest point from the users' villages, whereas the highest point, between Melung and Nigasi villages, is closest to the villages. However there are some scattered houses on the fringes of the forest. The whole forest is on the southern aspect of the Melung-Dandakarka hill. The

---

1 A small typical area within the prominent natural boundary was selected for comparison with land uses at other levels. The area selected was west of the Tamakosi river, south of Phadkekhola, east of the western boundary of Nigasi and north of Milti-khola.

2 More than 200 ha of plantation established in Jiri by JMDP which was phased out in the early 1970s, is not included in the figures prepared by HMG (1988).
forest area is a part of the catchment of Milti-khola\(^1\), a tributary of the Tamakosi river which it joins at Sitali.

The information collected, through discussion and from historical documents, regarding the other forests is given in Table 6.2. The areas of the specific forests are entirely estimated by the local people.

Forests were allocated according to the territory of *talukdars* in 1908-9. Though it was not possible to investigate documents relating to all of these allocations, it can be concluded, on the basis of documents found in the villages, that each forest was allocated to be managed by the respective *raitis* and *talukdars*. In this way, each forest had defined users.

### 6.1.4 Species composition

*Pinus roxburghii* is dominant, almost exclusive, in the top canopy throughout the forest. At lower elevations, *Shorea robusta* can be found, comprising only up to 15% of the canopy. The other associated species vary with the altitude. The forest can be categorised into the following two classes:

#### 6.1.4.1 Lower zone

*Shorea robusta* is mixed with *Pinus roxburghii* in the top storey. *Daubanga sonneratoides, Syzygium operculata, Alnus nepalensis* and *Schima wallichii* form the middle storey. However trees of *Terminalia tomentosa* and *Mangifera indica* may also be seen scattered near the lowest boundary. *Woodfordia fruticosa, Lagerstroemia parviflora, Rhus parviflora* and *Osyris wightiana* form the under storey. *Imperata* spp. are in the ground cover.

#### 6.1.4.2 Upper zone

*Pinus roxburghii* is the only species in the top canopy in the upper zone. In a very few localities, trees of *Schima wallichii* are surviving under the suppression of *Pinus roxburghii*, elsewhere the canopy is mostly exposed. Similarly *Alnus nepalensis* trees are scattered in the foldings. These old trees are remnants. The middle story is *Pinus roxburghii*. The shrubs include *Maesa macrophylla, Inula cappa, Reinwardtia indica, Rubus ellipticus, Berberis aristata* and *Pyracantha crenulata* in open areas. Coppices

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\(^1\) Milti-khola is the source of water for many irrigation channels to the lowlands of Melung, and Ratauli *panchayat* of Ramechhap district.
of *Rhododendron arboreum*, *Wendlandia* spp. and *Quercus lanuginosa* may also be seen. The under growth is *Dryopteris cochleata* and *Imperata* spp.

<table>
<thead>
<tr>
<th>Name of forest</th>
<th>Location (ward no)</th>
<th>Area in ha</th>
<th>Species</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Devithan</td>
<td>northern part (8)</td>
<td>1</td>
<td><em>Schima wallichii</em>, <em>Pinus roxburghii</em>, <em>Myrsine semiserrata</em>, <em>Bassia latifolia</em></td>
<td>religious forests</td>
</tr>
<tr>
<td>2.Simko-utiseghari</td>
<td>northern part (8)</td>
<td>13</td>
<td><em>Alnus nepalensis</em>, <em>Schima wallichii</em>, <em>Bassia latifolia</em></td>
<td></td>
</tr>
<tr>
<td>3.Bimire-utiseghari</td>
<td>northern part (8)</td>
<td>12</td>
<td>same as above</td>
<td></td>
</tr>
<tr>
<td>4.Chhiruwapani</td>
<td>northern part (6)</td>
<td>23</td>
<td><em>Alnus nepalensis</em>, <em>Schima wallichii</em></td>
<td>no document, now cultivated</td>
</tr>
<tr>
<td>5.Simpani-Simledhand</td>
<td>northern part (5)</td>
<td>7</td>
<td><em>Pyracantha crenulata</em>, <em>Berberis aristata</em></td>
<td>same as above</td>
</tr>
<tr>
<td>6.Urleni Pakha</td>
<td>northern part (5)</td>
<td>12</td>
<td>same as above</td>
<td>same as above</td>
</tr>
<tr>
<td>7.Thadipairi</td>
<td>eastern part, (5)</td>
<td>10</td>
<td><em>Schima wallichii</em>, <em>Alnus nepalensis</em>, <em>Bassia latifolia</em>, <em>Daubanga sonneratoides</em>, <em>Syzygium operculata</em></td>
<td>same as above</td>
</tr>
<tr>
<td>8.Gahate-pakha</td>
<td>eastern, (4)</td>
<td>16</td>
<td><em>Pinus roxburghii</em>, <em>Schima wallichii</em>, <em>Shorea robusta</em>, <em>Daubanga sonneratoides</em></td>
<td></td>
</tr>
<tr>
<td>9.Khanidanda Narayantar</td>
<td>southern, (1,2)</td>
<td>17</td>
<td><em>Shorea robusta</em>, <em>Pinus roxburghii</em>, <em>Terminalia tomentosa</em>, <em>Mangifera indica</em>, <em>Daubanga sonneratoides</em>, <em>Syzygium operculata</em></td>
<td>no document</td>
</tr>
<tr>
<td>10.Sanokatike-chhotedanda</td>
<td>southern, (9)</td>
<td>14</td>
<td><em>Pinus roxburghii</em>, <em>Shorea robusta</em>, <em>Schima wallichii</em></td>
<td></td>
</tr>
<tr>
<td>11.Kalleri-kuldhung</td>
<td>southern, (9)</td>
<td>15</td>
<td>same as above</td>
<td>same as above</td>
</tr>
<tr>
<td>12.Guranse Pani</td>
<td>southern, (9)</td>
<td>9</td>
<td>same as above</td>
<td></td>
</tr>
</tbody>
</table>
6.1.5 Forest type

Sallepakha forest resembles, more or less, the upper or Himalayan chir pine forest under the broad class of Himalayan subtropical pine forests as classified by Champion and Seth (1968). According to the association of species this forest is close to their description of the forests of U.P. India.

Stainton (1972) classified this type of forest as *Pinus roxburghii* forest, and has found that in this region (central midlands of Nepal) it is confined to those situations where conditions are drier than average. It is not uncommon on south-facing slopes or on ground which at one time has been under cultivation. But he indicates that the vegetation of this type of forest has been much altered by the activities of man. He has found only *Euphorbia royleana* and a few windblown shrubs at the lower end. On the contrary, *Shorea robusta*, *Schima wallichii*, and many other species are found in the lower part of Sallepakha forest.

6.1.6 Use of the forest and its condition

To document the physical condition of the forest, it was grouped into three localities. One locality was selected close to the cultivation; the second locality was selected in the middle of the forest; and the third locality was close to the main trail. The forest in the lowest zone is reasonably dense and least affected by use, so it is not represented in the following information. However 75 per cent of Sallepakha forest is covered by these data (Table 6.3).

<table>
<thead>
<tr>
<th>Facts</th>
<th>Close to the cultivation</th>
<th>Middle of the forest</th>
<th>Close to the main trail</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of trees/ha</td>
<td>159&lt;sup&gt;1&lt;/sup&gt;</td>
<td>287&lt;sup&gt;2&lt;/sup&gt;</td>
<td>96</td>
</tr>
<tr>
<td>Av. ht (m)</td>
<td>20</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>minimum</td>
<td>13</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>maximum</td>
<td>25</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Av. dbh (cm)</td>
<td>84</td>
<td>76</td>
<td>83</td>
</tr>
<tr>
<td>minimum</td>
<td>79</td>
<td>66</td>
<td>76</td>
</tr>
<tr>
<td>maximum</td>
<td>91</td>
<td>94</td>
<td>89</td>
</tr>
<tr>
<td>Seedlings/ha</td>
<td>96&lt;sup&gt;3&lt;/sup&gt;</td>
<td>328</td>
<td>127</td>
</tr>
<tr>
<td>Stumps/ha</td>
<td>64&lt;sup&gt;4&lt;/sup&gt;</td>
<td>64&lt;sup&gt;4&lt;/sup&gt;</td>
<td>0</td>
</tr>
</tbody>
</table>

<sup>1</sup> About 20 per cent of trees have a crooked or forked bole.
<sup>2</sup> About 5 per cent of trees are girdled.
<sup>3</sup> Half of them are uprooted.
<sup>4</sup> Mostly uprooted.
In addition to the above data, the following were observed throughout the forest:

- Intensive and uncontrolled grazing
- Heavily lopped trees.
- Presence of thorny bushes
- Dense *Eupatorium adenophorum* in patches.
- Bare ground, i.e. no dead and dry materials lying in the ground.
- More than 90% of regeneration is of *Pinus roxburghii*.
- No coppice was present.

### 6.2. FOREST USERS

The users of Sallepakha forest reside in Melung and Dandakharka *panchayats*. Only the wards 1 (Hile) and 9 (Nigasi) of Dandakharka and wards 7 (Katike and Thaledanda), 8 (Melung) and 9 (Nigasi, Sanumilti and Sallepakha) of Melung are the basic users of the forest. These areas lie on the north-east to north-west rim of the forest. The entry points to the forest form three groups - Melung, Katike and Nigasi. Residents of Hile and Melung are using the northern part (i.e. Melung), Nigasi the western part (i.e. Nigasi), and the others the eastern part (i.e. Katike) of the forest. However some households in Sallepakha are located on the eastern and northern rim of the forest, and some households of Sanumilti use the south-western section of the forest.

#### 6.2.1 Settlement pattern

The settlements of the users have both an urban and a rural pattern. As Melung was previously the headquarters of the area, the settlements in this locality are fairly densely located. Even today the area is developed as one of the nine service centres of the district. Elsewhere, the settlements are scattered. However clustering of a few houses from the same clan can be noticed throughout the area. Isolated houses are also encountered on the fringes of the forest.

#### 6.2.2 Economic categorisation

During the basic needs survey\(^1\), the *panchayat* prepared a record of the economic status among the people of the *panchayat*. The basis of

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\(^1\) The royal directives of 1986 to fulfil the basic needs of people by the year 2000 initiated the preparation of *panchayat*-level information on food, shelter, clothing, health, education and security. The survey was completed in Melung *panchayat* in the fiscal year 1988-89.
categorisation was whether they were able to meet their basic needs of food, clothing, shelter, health, education and security. The minimum basic need income *per capita* was estimated on 1984-85 prices at Rs 5.40 per day and Rs 1971 per annum (HMG, 1989). Households below this figure were categorised as poor and the rest as rich. The figures in Table 6.4 were provided by the Melung *panchayat* office during field work.

6.2.3 Ethnic composition

No information is available on the ethnic and caste composition of the users. However some impressions could be gained on the basis of household contacted (Table 6.5).

<table>
<thead>
<tr>
<th>Ward</th>
<th>Household</th>
<th>Population (poor)</th>
<th>Population (rich)</th>
<th>Population (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60</td>
<td>191</td>
<td>108</td>
<td>299</td>
</tr>
<tr>
<td>2</td>
<td>83</td>
<td>323</td>
<td>84</td>
<td>407</td>
</tr>
<tr>
<td>3</td>
<td>51</td>
<td>204</td>
<td>72</td>
<td>276</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>136</td>
<td>223</td>
<td>359</td>
</tr>
<tr>
<td>5</td>
<td>108</td>
<td>216</td>
<td>368</td>
<td>584</td>
</tr>
<tr>
<td>6</td>
<td>91</td>
<td>332</td>
<td>146</td>
<td>478</td>
</tr>
<tr>
<td>7</td>
<td>74</td>
<td>305</td>
<td>106</td>
<td>411</td>
</tr>
<tr>
<td>8</td>
<td>123</td>
<td>524</td>
<td>228</td>
<td>752</td>
</tr>
<tr>
<td>9</td>
<td>91</td>
<td>439</td>
<td>20</td>
<td>459</td>
</tr>
<tr>
<td>Total</td>
<td>735</td>
<td>2670</td>
<td>1355</td>
<td>4025</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Caste</th>
<th>Melung</th>
<th>Katike</th>
<th>Nigasi</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brahman/Chhetri(^1)</td>
<td>10</td>
<td>25</td>
<td>1</td>
<td>36 (22)</td>
</tr>
<tr>
<td>Tamang</td>
<td>14</td>
<td>3</td>
<td>41</td>
<td>58 (35)</td>
</tr>
<tr>
<td>Newar</td>
<td>43</td>
<td>3</td>
<td>4</td>
<td>46 (28)</td>
</tr>
<tr>
<td>Damai/Sarki</td>
<td>17</td>
<td>4</td>
<td>4</td>
<td>25 (15)</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>35</td>
<td>46</td>
<td>165 (100)</td>
</tr>
</tbody>
</table>

6.2.4 Demographic characteristics

The age of the household heads, and the average family size, are shown in Tables 6.6 and 6.7 respectively.

Information on the population changes among the users is lacking. Even the historical documents did not reveal anything regarding the numbers of households or any other hints that could be used to estimate the

---

\(^1\) Thakuri is included in this caste group.
trends of population. So a sample population of 88 was investigated to trace the historical trend of population growth among the users. After thorough discussion it was found that 20 years ago the population had been 63, 5 years ago it was 80 and at present it is 88. Thus the population growth rate was 1.69% during the past two decades (1970-90), 1.61% in the first 15 years (1970-85) and 1.92% in the last 5 years (1985-90).

Table 6.6 Age and sex of household head

<table>
<thead>
<tr>
<th></th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
<th>50-60 yrs</th>
<th>60-70 yrs</th>
<th>70-80 yrs</th>
<th>80-90 yrs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>7</td>
<td>24</td>
<td>27</td>
<td>34</td>
<td>27</td>
<td>11</td>
<td>6</td>
<td>136</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>11</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>28</td>
<td>29</td>
<td>45</td>
<td>33</td>
<td>12</td>
<td>10</td>
<td>165</td>
</tr>
</tbody>
</table>

Table 6.7 Family size

<table>
<thead>
<tr>
<th></th>
<th>Melung</th>
<th>Katike</th>
<th>Nigasi</th>
<th>All users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.20</td>
<td>6.21</td>
<td>7.76</td>
<td>7.15</td>
</tr>
<tr>
<td>Std dev.</td>
<td>3.75</td>
<td>3.70</td>
<td>3.87</td>
<td>3.79</td>
</tr>
</tbody>
</table>

There are no written records of out-migration but it is certain that people have migrated to the Tarai. So far as in-migration is concerned, only two households out of 165 were found to have migrated to this area a decade ago.

This area is above average in education so far as Dolakha district is concerned. At the moment there are six primary schools and one long-established high school in Melung panchayat and there are five primary schools in Dandakharka panchayat. The literacy rates are 46 per cent and 30 per cent for Melung and Dandakharka panchayats respectively (Anon., 1989). However the proportion of children going to school is 23 per cent and 9 per cent in the respective panchayats.

6.2.5 Animal husbandry

Animal husbandry is popular among the users. Almost all households contacted have some kind of livestock. Out of the total households contacted, 111, 96, 81, 74, 16 and 4 households are involved in rearing goats, oxen, buffaloes, cows, pigs and sheep respectively. Rearing of pigs is influenced by the caste system. Thus out of the 16 pig-rearing households, 13 are Damai, 1 Sarki and 2 Tamang. Rearing other livestock has no direct relation with such ethnic or caste background but depends on
the landholding, labour availability and the management system for common land resources. Table 6.8 gives the type and population of livestock among the users in different villages. The type of livestock also depends on the topography of the land. Buffaloes cannot move on steep land as cows and oxen can. Goats are adaptable to any slope. The figures of Table 6.8 reflect these relations as Melung, Nigasi and Katike are in order of plain to steep slope. Thus Melung has on average more buffaloes, Nigasi has more goats and Katike has more cows. But this relation is not fixed and depends on the other factors such as type and size of landholding, and so should not be generalised.

<table>
<thead>
<tr>
<th>Villages</th>
<th>Buffaloes</th>
<th>Cows</th>
<th>Oxen</th>
<th>Goats/sheep/pig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melung</td>
<td>Mean</td>
<td>1.73</td>
<td>1.49</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Std dev.</td>
<td>0.98</td>
<td>0.84</td>
<td>0.85</td>
</tr>
<tr>
<td>Katike</td>
<td>Mean</td>
<td>1.59</td>
<td>2.30</td>
<td>1.85</td>
</tr>
<tr>
<td></td>
<td>Std dev.</td>
<td>0.91</td>
<td>1.26</td>
<td>0.75</td>
</tr>
<tr>
<td>Nigasi</td>
<td>Mean</td>
<td>1.65</td>
<td>1.20</td>
<td>1.55</td>
</tr>
<tr>
<td></td>
<td>Std dev.</td>
<td>0.78</td>
<td>0.42</td>
<td>0.51</td>
</tr>
<tr>
<td>Users</td>
<td>Mean</td>
<td>1.67</td>
<td>1.70</td>
<td>1.81</td>
</tr>
<tr>
<td></td>
<td>Std dev.</td>
<td>0.89</td>
<td>1.03</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Stall feeding is increasing, but a large number of households still depend on grazing. Usually buffaloes are stall fed, whereas cows and goats are grazed. Nigasi and Katike are closer to the pasture land than Melung. Thus the figures of Table 6.8 could reflect the results of such local factors.

6.2.6 Landholding

Landholding among the users is presented in Table 6.9. Availability of khet land depends on the elevation and slope of the terrain. Nigasi is at the highest elevation and Katike is the steepest in the study area and so these have the smallest areas of khet.
Table 6.9 Landholding per household (areas in ropani)

<table>
<thead>
<tr>
<th>Village</th>
<th>Khet</th>
<th>Pakho</th>
<th>Kharbari</th>
<th>Gharbari</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melung</td>
<td>Mean</td>
<td>24.03</td>
<td>8.55</td>
<td>0.01</td>
<td>5.60</td>
</tr>
<tr>
<td></td>
<td>Stdv</td>
<td>24.65</td>
<td>6.85</td>
<td>0.09</td>
<td>5.17</td>
</tr>
<tr>
<td>Katike</td>
<td>Mean</td>
<td>20.11</td>
<td>7.72</td>
<td>0.95</td>
<td>4.78</td>
</tr>
<tr>
<td></td>
<td>Stdv</td>
<td>14.06</td>
<td>8.27</td>
<td>2.42</td>
<td>3.37</td>
</tr>
<tr>
<td>Nigasi</td>
<td>Mean</td>
<td>9.29</td>
<td>8.86</td>
<td>0.40</td>
<td>2.72</td>
</tr>
<tr>
<td></td>
<td>Stdv</td>
<td>7.57</td>
<td>2.77</td>
<td>0.90</td>
<td>2.40</td>
</tr>
<tr>
<td>Users</td>
<td>Mean</td>
<td>18.32</td>
<td>7.13</td>
<td>0.32</td>
<td>4.61</td>
</tr>
<tr>
<td></td>
<td>Stdv</td>
<td>19.51</td>
<td>6.65</td>
<td>1.24</td>
<td>4.36</td>
</tr>
</tbody>
</table>

6.2.7 Outside employment

Out of the 165 households contacted, 39 people from 30 households were found to be employed away from their farms. The employment opportunities vary from plantation watcher and teacher at the local level, and carpet-factory worker in Kathmandu to government officer anywhere in the country, and one person was employed in India. The people who are neither exerting pressure on, nor contributing to the development of, forestry resources throughout the year are those who are employed out of the local area. Only 34 people were found to be living out of the village nearly all the time, with no significant impact on the forest.

6.2.8 Dependence on forests

The use of a forest depends on its physical condition and its management arrangements. Thus use of any forest is not fixed or static but is dynamic and is manageable by adjusting the need and use of the forest products, as will be shown below in the case of Sallepakha forest.

6.2.8.1 Change in the use of the Forests

Though there are many forests in Melung panchayat (see Table 6.2), Sallepakha is the most convenient to the users (refer section 6.2.1). The study collected all the information according to the questionnaire (Appendix XIVA). But the responses from the users were mostly about the products listed in Table 6.10. The total number of responses is not the same for all the products.
### Table 6.10 Changes of sources for various forest products (by households)

(R - reported, C - corrected)

<table>
<thead>
<tr>
<th>Products</th>
<th>Period</th>
<th>Sallenpakha</th>
<th>Other Forests</th>
<th>Bari</th>
<th>Purchase</th>
<th>Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>R</td>
<td>C</td>
<td>R</td>
<td>C</td>
<td>R</td>
</tr>
<tr>
<td>Fuelwood</td>
<td>20 yrs ago</td>
<td>117</td>
<td>84</td>
<td>33</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>92</td>
<td>84</td>
<td>31</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>30</td>
<td>30</td>
<td>39</td>
<td>39</td>
<td>57</td>
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<tr>
<td></td>
<td>Future</td>
<td>9(31)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fodder (For stall-feeding)</td>
<td>20 yrs ago</td>
<td>42</td>
<td>30</td>
<td>9</td>
<td>6</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>34</td>
<td>31</td>
<td>5</td>
<td>5</td>
<td>66</td>
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<tr>
<td></td>
<td>Present</td>
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<td>4</td>
<td>8</td>
<td>8</td>
<td>82</td>
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<tr>
<td></td>
<td>Future</td>
<td>2(6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Grass (thatching)</td>
<td>20 yrs ago</td>
<td>18</td>
<td>13</td>
<td>3</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>15</td>
<td>14</td>
<td>2</td>
<td>2</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>7</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>3(2)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Timber</td>
<td>20 yrs ago</td>
<td>72</td>
<td>52</td>
<td>30</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>46</td>
<td>42</td>
<td>25</td>
<td>23</td>
<td>37</td>
</tr>
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<td></td>
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<td>131</td>
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<tr>
<td></td>
<td>Future</td>
<td>5(9)</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Fencing</td>
<td>20 yrs ago</td>
<td>43</td>
<td>31</td>
<td>13</td>
<td>9</td>
<td>43</td>
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<td>10(5)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Leaf-litter</td>
<td>20 yrs ago</td>
<td>59</td>
<td>42</td>
<td>10</td>
<td>7</td>
<td>26</td>
</tr>
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<td></td>
<td>5 yrs ago</td>
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<td>21</td>
<td>5</td>
<td>5</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>13(2)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Shed-poles</td>
<td>20 yrs ago</td>
<td>63</td>
<td>45</td>
<td>18</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>33</td>
<td>30</td>
<td>17</td>
<td>15</td>
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<td></td>
<td>Present</td>
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<td>9</td>
<td>14</td>
<td>14</td>
<td>79</td>
</tr>
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<td>Future</td>
<td>5(2)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jhikra</td>
<td>20 yrs ago</td>
<td>94</td>
<td>67</td>
<td>17</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>52</td>
<td>47</td>
<td>17</td>
<td>15</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>Present</td>
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<td>19</td>
<td>10</td>
<td>10</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>4(8)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Danda-Bhata</td>
<td>20 yrs ago</td>
<td>62</td>
<td>44</td>
<td>20</td>
<td>14</td>
<td>39</td>
</tr>
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<td>25</td>
<td>14</td>
<td>13</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Present</td>
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<td>8</td>
<td>11</td>
<td>11</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>4(5)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Plate-leaves</td>
<td>20 yrs ago</td>
<td>33</td>
<td>24</td>
<td>93</td>
<td>67</td>
<td>3</td>
</tr>
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<td>17</td>
<td>95</td>
<td>86</td>
<td>5</td>
</tr>
<tr>
<td></td>
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<td>8</td>
<td>8</td>
<td>89</td>
<td>89</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>7(0)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tool-handles</td>
<td>20 yrs ago</td>
<td>23</td>
<td>16</td>
<td>70</td>
<td>50</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>11</td>
<td>10</td>
<td>65</td>
<td>59</td>
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<td></td>
<td>Present</td>
<td>3</td>
<td>3</td>
<td>64</td>
<td>64</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>3(2)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Halo</td>
<td>20 yrs ago</td>
<td>13</td>
<td>9</td>
<td>35</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>4</td>
<td>4</td>
<td>30</td>
<td>27</td>
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<td></td>
<td>Present</td>
<td>1</td>
<td>1</td>
<td>28</td>
<td>28</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Future</td>
<td>0(1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Forest grazing</td>
<td>20 yrs ago</td>
<td>107</td>
<td>77</td>
<td>24</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>5 yrs ago</td>
<td>92</td>
<td>84</td>
<td>26</td>
<td>24</td>
<td>24</td>
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<td></td>
<td>Present</td>
<td>73</td>
<td>73</td>
<td>24</td>
<td>24</td>
<td>24</td>
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<tr>
<td></td>
<td>Future</td>
<td>61(0)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1 Figure in brackets under this column represents plantations
As in sections 4.2.6.1. and 5.2.7, the values reported in interviews have been corrected to take account of population increase since 1970. The correction factors are 1.0, 0.909 and 0.716 for 1990, 1985 and 1970 respectively.

The use of Sallepakka and nearby forests has declined in recent years (Table 6.10) probably because these forests were no longer able to supply significant quantities of materials for potential user households. This is a consequence of the degradation of the forest consequent upon the collapse of earlier management systems and the coming into being of a virtually open access system. To compensate for this loss of forest resource, many tree products are now obtained from private land (especially *bari*) and purchase of some products is now common. Grazing in the degenerate forests has not declined but stall-feeding is increasing (corrected numbers of households were 10, 23 and 42 for 1970, 1985 and 1990 respectively).
6.2.8.2 Market system

Table 6.10 also gives information on the initiation and expansion of a market system among the users. Whereas there was not a single household buying fuelwood twenty years ago, about 15 per cent of the households are now doing so. Similarly the number buying products such as timber, material for fencing, sheds, danda-bhata and jhikra has greatly increased. Though a considerable number of households were buying leaves, tool-handles and halo twenty years ago, purchase of these has also been increasing during this period. The leaves are openly sold in the hat (weekly market), whereas other products are brought and sold through informal agreements between the buyers and sellers. An interesting aspect of this is that the buyers and sellers are among the forest users themselves. However products such as handles for implements and halo are collected from Sailung forest, which is about 4 hours walk from the village.

6.2.8.3 Changes in the use of forest products

The main changes in the use of forest products have been brought about by the availability of polythene and bamboo. Polythene has replaced the use of leaves for umbrellas and as material for rope-making. Bamboo is being used in place of many forest products.

6.3. HISTORY OF SALLEPAKHA FOREST MANAGEMENT

6.3.1 Evolution

The documented history regarding forest management in Melung area starts at the beginning of the Rana period with the issuing of orders by the central authority (D65, 66, 73). However, these were in response to the applications of local people. Thus the forests before the Rana period were the concern of the local people. Local people were aware of the consequences of deforestation (D65). The central authority prohibited the cutting of trees even in the land allocated under khangi (D66, 73).

The organisation of jangi-pareth was introduced in 1878-79 to maintain law and order in the hills region, enforcing the legal code of 1854. Protection of forests and regulation of forest products for the local need was
part and parcel of the duties of this organisation. However a separate order had to be issued if the forest products were needed for official purposes. Thus the forests were under the supervision of the Melung jangi-pareth till the beginning of this century.

The then government decided to hand over all the responsibility for forest management to the local talukdars and raitis in 1908 (see Appendix IX). This was implemented in different phases. All the forests lying in the present area of Melung and part of Dandakharka were handed over by the end of 1910. These documents also provide the evidence of the condition the forest at that time. Forests were allocated to the talukdar and raiti of the respective taluki as follows:

i. Chyne-khola, Kafle-khola, Bajeni-khola-ban, Simko-utiseghari, Bimire-utiseghari, Sanu-katike, Kalleri-salghari, Jaruwa-salghari, Sallepakha, Guransepani-salghari and Devisthan-ban were under the taluki of Melung.

ii. Thadipairi under one taluki.

iii. Gahate-pakho under the taluki of Birauta.

iv. Jogidanda etc. under one taluki.

Information from discussions with the users, local elders, and some panchayat officials is given in Table 6.2.

The forest of Melung faced attack at the beginning of the 1940s. This happened when outsiders were appointed as talukdar and started to cultivate the forest area. Later the talukdars and others who had done this were penalised under the Land Reclamation Act (Legal Code 1854) by the land revenue office of Dolakha. Also, the office staff who were involved in the endeavour were punished under the legal code.

A decision made by Dolakha mal office in 1951 (Appendix X) reveals that the forest had big trees of species specified in the forest legislation, which shows that the forests had been effectively protected by the enforcement of forest enactments. The chitaidar had to report to the local functionaries in case of indiscriminate action in the forest and the local functionaries had to initiate action against offenders. But in the case of Sallepakha forest, the local functionaries were involved themselves in deforestation by allocating the forest land to individuals in return for personal benefits. These local functionaries were found guilty and were punished by decision of the mal in 1951 (Appendix XI).
The attacks initiated just before 1950 did not stop even after the decision of the *mal*. Rather the local functionaries who were found corrupt continued their illicit activities. As no efforts had been made before to create local institutions to manage the forest, the forests in Melung were really no one's responsibility other than the local functionaries, till the arrival of officers of the Forest Department in the late 1970s. The local functionaries for forest protection became ineffective after the introduction of the Forest Act of 1961 which did not authorise such positions and functions and in fact repealed the orders issued in former times regarding forest protection. Thus the new legislation actually worsened the forestry situation and encouraged the extra-legal activities of the former local revenue functionaries. The effects of such activities are still evident in the case of Sallepakha forest.

Though all the forests of Melung were put under the responsibility of local users early this century, the role of the *jangi-pareth* remained significant until it was moved from Melung in 1951. But there remained some doubt about its involvement in protection, as there was an attempt to clear Sallepakha forest and register it as crop land in 1943 (Appendix X). Whatever the involvement of *jangi-pareth*, local people appointed a *chitaidar* to protect forests immediately after they were handed over to the local users. Once five *chitaidars* were working under the *taluki* of Melung. A *chitaidar* worked till about 1969, but the system stopped when the *chitaidar* died. No evidence could be traced of the appointment of *chitaidars* for other forests.

The *jangi-pareth* took the responsibility of protecting the forest, as they needed timber to build offices and for fuelwood. Their agreement was necessary for local people to get timber. Even after responsibility was taken away from them and given to local *talukdars* and people, their consent was being sought while they were stationed there (up to 1951). The actual situation is depicted in Figure 6.4.

In summary we can say that control and management of the forests of Melung, including Sallepakha, diminished progressively after 1951 and eventually ceased. Thus Sallepakha forest faced the problem of open access, from the withdrawal of the *jangi-pareth* till the late 1980s.

Before the implementation of the National Forestry Plan (HMG, 1976), one range office, functioning under the Chief District Officer, was responsible for managing all the forests of Dolakha district. However, forests
around Jiri were specially managed under the project activities\(^1\). In 1977, a divisional forest office was created with the responsibility of managing the forests of Dolakha and Ramechhap, with a role confined to legal action against offenders (FAO, 1981). Only recently, community forestry activities have been initiated under the forestry programme of the Integrated Hill Development Project and about 28 ha of plantation have been established. In addition, the area has become one focus of forestry field staff since reorientation was initiated in the district in 1986 (Roche, 1989b), but results of this are yet to be seen. This activity is directed towards emphasising local management.

### 6.3.2 Aspects of management

From the foregoing section, it is clear that the old system of management in Sallepakha was discontinued slowly after 1951. After the deterioration of that system there was no other system to support the traditional management until recently, when community forestry programmes in the district were initiated to support the existing local management through a series of reorientation exercises among the field staff (Anon., 1988; Gautam and Roche, 1987; Gautam, 1988a, b, c; Gronow, 1987; Roche, 1989a and 1990). However, it is too early to judge the effects of such reorientation activities. So the aspects of the management mentioned in this section would cover the old system that applied until the end of Rana period and slowly deteriorated until government's forestry authority became involved.

#### 6.3.2.1 Protection arrangements

The protection of Sallepakha had two dimensions. One was protecting its legal status as forest, and the other was protecting it from encroachment and illicit cutting of trees. Though they are interlinked, the responsibilities lay with different authorities. The imposition of rules by an external authority proved to be necessary and effective for the former, but participation by local people became the basis for the latter.

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\(^1\) Jiri Multi-purpose Development Project (JMDP) was initiated during the the third plan (1965-70) as a pilot hill area development project (Pradhan, 1985). Forest and pasture was one of the major sectors. Forestry activities were carried out in substantial areas in and around Jiri valley.
Attempts to convert the forest to crop land started when 0.3 ha of forest beside the Milti-khola was registered as *khet* in 1924\(^1\). In addition, some of the forest above the registered *khet* land was registered as *kharchari* prior to 1924 and was later allocated under *bijan* in 1946. But a document issued in 1908 reveals that a portion of the forest on the southern border had already been reclaimed but was disputed\(^2\), and this is also indicated in an application (Appendix X) submitted to the *maharaja* in the early 1940s. Thus the southern part of the forest was already under attack before the *banpala-sanad* was issued in 1908. It was partly converted to *khet* and partly registered but not cultivated.

In the early 1940s, the local *talukdar* was relieved of his responsibility on the basis of complaints from the local people. The new *talukdar*, appointed from another village, allocated the forest land to individuals as crop land (Appendix X), which was reported to the king through the submission of an application by the *chitaidars*. However, action was not taken until January 1951, during the Rana period, when a decision was made by Dolakha *mal* office repealing all these attempts and declaring that it had the status of government forest being managed for the local people's need (Appendix XI).

The *chitaidar* had the responsibility to initiate action on the basis of what was happening in the forests. The strict enforcement of terms and conditions of the permits given to regulate the forest products was another responsibility of *chitaidars*. As mentioned earlier, up to five *chitaidars* were engaged in the protection of forests of Melung *taluki*. As people never used to attempt to cut trees without asking a *chitaidar*, there was not much work for the *chitaidar* to do, and there was no arrangement to pay him. However the *chitaidar* was exempted from the other labour obligations, and there was a practice of offering some sort of gift to him (*wine, kurauni, ghiu, fruits, vegetables etc.*) during the time of visits to obtain timber.

The appointment of a *chitaidar* was made by the *goswara* on the recommendation of the *talukdars*. Village people who had expressed an interest were recommended. The order issued by the *goswara* served as both

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1 This is mentioned in an application of Indra Bahadur Tamang of Sanu-milti, which was submitted to the District Forestry Office in connection with a conflict concerning part of Sallepakha forest.
2 One of the boundaries given in the *banpala-sanad* of Melung (Appendix IX) is Nikasiko-jhagadiya-khoria which means controversial reclaimed land of Nigasi and that lies at the present southern boundary of Sallepakha.
the appointment document and the authorised instructions whereas the application served as commitment.

6.3.2.2 Utilisation and distribution of forest products

There was no restriction on collecting dead or dying twigs and branches for fuelwood. Collection of grasses and grazing was normal in most of the forests. The main principle behind the protection was not to damage green trees of any kind and age. Whenever people needed timber they had to get permits from the *chitaidar*. However, the chief of the *jangi-pareth* continued to be involved, indirectly, in permitting the extraction of timber, since the *jangi-pareth*’s needs had also to be met from the forest (see Figure 6.4).

The permit specified the number and species of trees to be cut. The following sequential order of preference had to be followed as far as possible:

i. Fallen trees  
ii. Dead trees  
iii. Branches of dying trees  
iv. Main shoots of dying trees  
v. Stunted green trees  
vi. Branches from green trees  
vii. Overmature green trees, maintaining an even spacing.  
viii. Trees which were suppressing other promising trees.  
ix. Other trees.

However the overriding condition for selecting the trees was to minimise damage to other trees near by. In practice the permit used to specify one to four trees depending upon the use and size of the trees. *Shorea robusta* used to be permitted for beams to use as pillars (*tham*) and timber for doors and windows; *Pinus roxburghii* and *Alnus nepalensis* for beams (*dalin*); *Pinus roxburghii*, *Alnus nepalensis* and *Rhododendron arboreum* for *chirpat*. Later *Euphorbia royleana* replaced the other species for *chirpat*, and now *Dendrocalamus* species are being used. For fuelwood, *Pinus roxburghii* and *Alnus nepalensis* were being permitted.
Figure 6.4 Forestry in Melung during late Rana period
6.3.2.3 Dealing with disputes

When anyone violated the instructions, the *chitaidar* had to report to the *talukdar* or *dware*, who dealt with such cases in the first instance. The first aim was to make the offender confess his offence. If he confessed the offender agreed to a document stating that he would not to repeat the offence.

If the offender did not confess, the practice was to escort him to the district *goswara* along with the opinions of the *talukdar* and *chitaidar*, for a decision under the discretion of the *bada-hakim*. Two people were dealt with by the *goswara* and punished Rs 10.00 each in the mid-1940s for infringing the conditions of their permits.

If there were more than one *chitaidar*, it sometimes happened that one *chitaidar* issued permits while another was inspecting and reporting. In such instances, if the cutting was within the conditions of the permit, no action followed. Cutting under the conditions of permit was not an offence but infringing the conditions would attract penalties.

On the other hand, disputes regarding encroachment were never dealt with locally. Generally people did not encroach on the land unless the *talukdar* had issued some extra-legal document which could used as a permit to reclaim forest land. So such cases always had to be dealt with by a higher authority. However people had the right to present their cases during investigations by the respective authorities. The decision made by the Dolakha *mal* (Appendix XI) in 1951 justifies this statement.

6.3.3 Downward spiral of Sallepakha forest

The process of degradation was traced mostly through the memory of the villagers. Laxman Bhandari (aged 61) recollects his memory regarding the western part of Sallepakha forest as follows:
i. The western part of Sallepakha (particularly in the west of Kubinle) had dense forest until mid-1940s.

ii. In the beginning of the 1950s, about 2 ha of forest land was cleared and registered as private crop land in the names of Lal Bahadur Tamang, Amar Singh Tamang, Bir Man Tamang, Pancha Man Tamang, Krishna Bahadur Tamang and Kumar Singh Tamang.

iii. Before he left for Calcutta in 1954, the rest of the forest was dense.

iv. When he returned home in 1969, only a few trees were left and much of the forest land was cleared.

v. There were a few trees still standing when he left for Calcutta again in 1970.

vi. There were no trees left when he returned in 1977.

He remembered and reinforced the existence of dense forest till the beginning of the 1950s and reinforced this memory because he had no problem in getting timber close to his land when he was building a house in 1951, as his family had just shifted from Chhap, another village of Melung panchayat.

The above facts are more or less confirmed by discussions with other people in the villages of Melung panchayat, although the extent of degradation varied in the different sections of the Sallepakha forest. The common feeling among the users was that the forest was degraded and encroached upon after 1951. The degradation accelerated when the forest was categorised as government forest after the initiation of the panchayat system. The degradation of Sallepakha forest is also attested by the findings of a land-use survey done in 1978-79 (HMG, 1984), which categorised the western part of the forest as grazing land and the rest of the forest under 40 % canopy cover.

6.3.4 Reasons for forest degradation

6.3.4.1 The regeneration and Eupatorium adenophorum

There used to be profuse regeneration in former times but now it is very scarce. Local people think regeneration was seriously affected by an attack by locusts in 1952 which was followed by the proliferation of a new weed species, Eupatorium adenophorum. At the time when regeneration was profuse, grazing had a minimal effect but it became severe when regeneration became scarce. The people justify this by showing the structure of forests where trees of the younger age are difficult to see.
6.3.4.2 Categorisation as a government forest

After the introduction of the *panchayat* system, forests were categorised as either government or village forest. It was mostly government forests which were under attack through registration as crop land in the name of individuals with the involvement of *talukdars*. This was one of the reasons why the forest west of Kubinde of Sallepakha was registered. This happened to other forests too. The forests which were categorised as village forest were not encroached on in this manner but trees were often cut indiscriminately.

6.3.4.3 Responsibility lay with the non-users

Attack on part of Sallepakha was initiated when the local *talukdar* was replaced by an outsider and also when the *pradhan-panch* and *upa-pradhan-panch* were elected from an other area.

6.3.4.4 Shape of the *panchayat*

In the shaping of the *panchayat* boundary, forest to the west of Kubinde was in Melung *panchayat* whereas the majority of the users became residents of Dandakharka *panchayat*.

6.3.4.5 Lack of appropriate communication of policy

Though the Forest Act of 1961 repealed all the previous orders (*sanad, sawal* etc.) relating to forestry matters, it is not known when the *chitaidars* were actually dispensed with. Though there was a lot of speculation about nationalisation of the forest, and the Forest Department taking control of all the forests, the people were left ignorant of any immediate arrangements made by the government, neither were they helped or encouraged to manage their resources themselves.

6.3.4.6 System of harvesting

Under the system of issuing permits allocating specific trees for extraction, trees were being allocated even in the remote parts of the forest, so the pressure was well distributed all over the forest. But after this system ended in the late 1950s, people had to enter the forest illegally to collect their forest products. They aimed to be in the forest as little as possible, particularly during the day, so they carried out their collections at night.

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1 Daregaunda, which was forest thirty years ago, is now private crop land.
2 In this way Dumre Vir, Jyamire Vir, Drube Vir and Bhedi Khor have become barren.
They admitted an attitude that forest was "sarkari" (government) during the day and "manapari" (do as you like) during the night. So they tended not to go to remote parts of the forest, nor to select dead, fallen, overmature or stunted trees, but cut whatever was easy and near at hand, irrespective of the stage of growth or form. Thus they cleared the forest from the fringes. These activities prevented regeneration in the fringes and in the remote areas there was little regeneration because of the dead and fallen trees. Thus the forest degraded.

6.4 PRESENT STATUS OF FOREST MANAGEMENT

The majority of the local people expressed the view that the old Sallepakha forest is degraded. Its appearance is shown in Plates 6.1, 6.2, and 6.3. People who responded otherwise have done so because of the community forestry activities which were initiated very recently. Though more than 90 per cent of the local people contacted claim that the green trees of the forest are now being protected, the forest is still being degraded. Management of Sallepakha forest by a local institution has still to be initiated. Although after the initiation of community forestry, people have expressed a desire to use the forest on a sustainable basis in future, their expressions regarding the controlling authority of Sallepakha forest, as shown in Table 6.11, reveal the absence of any effective local management institution or commitment.

Table 6.11 Forest controlling authorities

<table>
<thead>
<tr>
<th>Controlling authority</th>
<th>No of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestry personnel</td>
<td>58</td>
</tr>
<tr>
<td>Watcher paid by DFO</td>
<td>58</td>
</tr>
<tr>
<td>Panchayat</td>
<td>28</td>
</tr>
<tr>
<td>Rich people</td>
<td>3</td>
</tr>
<tr>
<td>Panchayat and ranger</td>
<td>5</td>
</tr>
<tr>
<td>Villagers</td>
<td>4</td>
</tr>
</tbody>
</table>

The regulation of forest products required for local people is still done through permits from DFO. The local people's only involvement in forest protection is through the appointment of a watcher for the newly planted area and submission of a few reports of forest offences to the appropriate authorities.

1 Panchayat nurseries were established in Dandakharka and Melung only in 1987 and 1988 respectively. About 50 ha had been planted in this area by the end of 1988.
PLATE 6.1 Sallepakha forest as seen from Sisneri chautara

PLATE 6.2 Sallepakha forest as seen eastward from Kubinde
6.5 CONCLUSION

Sallepakha forest was for long under the management of external authority. Though the forest was made the responsibility of local people and functionaries in 1908, the influence of the *jangi-pareth* did not allow the evolution and functioning of any system or institution for engaging the interest of the local people. Rather, it paralysed local initiatives. No efforts were made by state authorities to provide avenues for the involvement of local institutions, even in cases where there was local interest. So by the time the *jangi-pareth* moved from Melung in 1951, the forest had become an open access resource. Efforts to maintain a stable forest to sustain the supply of forest products in perpetuity need to be based on the support of indigenous institutions.
7. FORESTRY AT THE LOCAL LEVEL

V: DISCUSSION

It is clear from the study of these three forests that they vary in their history and their present condition. Betini forest is a relatively stable forest with a long known history over two centuries; Kamang is similarly stable with a known history of more than half a century. Sallepakha forest was fully stocked till the beginning of the 1930s and has degraded subsequently. The following paragraphs will attempt to examine the various factors which may have been responsible for this variation.

7.1 LAND USE

Table 7.1 Comparison of land uses

<table>
<thead>
<tr>
<th>Land use</th>
<th>Sallepakha ha (%)</th>
<th>Kamang ha (%)</th>
<th>Betini ha (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural forest</td>
<td>423 (28)</td>
<td>244 (22)</td>
<td>411 (28)</td>
</tr>
<tr>
<td>Degraded forest</td>
<td>73 (5)</td>
<td>226 (20)</td>
<td>115 (8)</td>
</tr>
<tr>
<td>Grassland</td>
<td>269 (18)</td>
<td>279 (25)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Farmland</td>
<td>703 (47)</td>
<td>359 (33)</td>
<td>956 (64)</td>
</tr>
<tr>
<td>Other</td>
<td>27 (2)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Total</td>
<td>1495 (100)</td>
<td>1108 (100)</td>
<td>1482 (100)</td>
</tr>
</tbody>
</table>

Table 7.1 (which is based on 1978-79 aerial photos) shows that natural forest occupies the same proportion of total land in present-day Sallepakha and Betini whereas it is smaller in Kamang. The proportion of agricultural land is highest in Betini and lowest in Kamang. If we group the total land uses into two classes, "Forest" and "Farmland", the result is as shown in the Table 7.2.
Table 7.2 Comparative forest/farmland ratios

<table>
<thead>
<tr>
<th>Land-use</th>
<th>Sallepakha ha (%)</th>
<th>Kamang ha (%)</th>
<th>Betini ha (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest</td>
<td>765 (53)</td>
<td>749 (67)</td>
<td>526 (36)</td>
</tr>
<tr>
<td>Farmland</td>
<td>703 (47)</td>
<td>359 (33)</td>
<td>956 (64)</td>
</tr>
<tr>
<td>Total</td>
<td>1468 (100)</td>
<td>1108 (100)</td>
<td>1482 (100)</td>
</tr>
<tr>
<td>Forest/Farm land (Ratio)</td>
<td>1.09</td>
<td>2.09</td>
<td>0.55</td>
</tr>
</tbody>
</table>

Although these data no doubt contain errors arising from the selection of the sample areas, the forest/farmland ratio appears to have no significant relationship with the stability of forest management. It is therefore difficult to predict how increase in forest cover by plantation will influence the effectiveness of management.

However, it is certain that degraded forests are present in all three areas and elsewhere (Mahat, 1985; Mahat et al., 1987a; Mahat et al., 1987b; Metz, 1990; Exo, 1990). Further degradation of such forests has resulted in most of the present-day grassland (see section 6.3.3). Local people have expressed a desire to use plantations for their future supply of forest products (see Table 6.10) and have also initiated plantations on pasture land (refer section 5.3.2.4). Thus such forestation programmes can make a significant impact on the degradation problems (Gilmour, 1988), eventually changing the land-use pattern. So the forestry situation could be improved, to some extent, by changing land use within the non-arable category.

7.2 FOREST TYPES

On the basis of broad classification, Sallepakha forest is conifer forest and the other two are broad-leaved forests. So out of these three forests, the broad-leaved forests are managed and the conifer forest is degraded.

Molnar (1981) noted forest type as a factor of motivation towards initiating management. Fisher et al. (1989) traced the history of management of different forests in Sindhupalchok and Kabhrepalanchok, in which broad-leaved forests (Nalako-thulo-ban, Ganeshthan-ban, Maina-bisauni-ban, Mahankal-ban, and Padhyerako-ban) have stronger local management systems than other forests. Similarly in a study in Kabhrepalanchok district (Jackson, 1990), all the forests (excluding plantation) which are managed or

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1 The land under "other" category in Table 7.1, which is 27 ha of alluvial fan on the side of the Tamakosi river, is not included in either category in this table.
protected locally are broad-leaved forests. It is of course true that in both districts there is far more middle and low altitude broad-leaved forest than conifer forest (Mahat, 1985) and this must have biased the observation.

Nonetheless, other studies (Gautam, 1986; Rusten, 1989; Pokharel, 1991; Pandey and Yadama, 1990; Griffin, 1991) have shown that local people’s preferences regarding their requirements for fodder, fuelwood and timber are for broad-leaved trees and this may result in the more frequent local management of broad-leaved forests.

People’s perception of traditional practice is likely to be a dominating factor in their management of any forest. Pine trees (possibly Pinus roxburghii and P. wallichiana) and Shorea robusta were protected through various orders (D22, 43, 47 and Appendices II, XI), which prohibited use for local needs. These trees were understood to be the government’s trees and eventually lost the respect of local people\(^1\), whereas forests having trees of other broad-leaved species (e.g. Castanopsis, Quercus, Alnus and Schima spp.) are not still considered as government but as private or communal forests (Fox, 1983).

7.3 FOREST USERS

7.3.1 Ethnic variation

Settlement patterns are not very different in the three areas studied. Ethnic composition is shown in Table 7.3

<table>
<thead>
<tr>
<th>Ethnic/caste group</th>
<th>Sallepakha%</th>
<th>Kamang%</th>
<th>Betini%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamang</td>
<td>35</td>
<td>78</td>
<td>55</td>
</tr>
<tr>
<td>Brahman/Chhetri</td>
<td>22</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Newar</td>
<td>28</td>
<td>0</td>
<td>2.5</td>
</tr>
<tr>
<td>Occupational castes</td>
<td>15</td>
<td>18</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Thus Kamang is dominated by Tamang; Betini users consist of two major groups, Tamang and Brahman/Chhetri, whereas all four groups are well represented among the Sallepakha users.

\(^1\) It is interesting to quote a Burmese event. Local people in Burma are scared of regeneration of Tectona grandis on their farm, as any such tree belongs to the government (Aung Than, pers.comm. 1990-91). It is likely that whenever the people notice such seedlings on their land they uproot them.
Molnar (1981) noted differences between various ethnic/caste groups in their motivation to maintain traditional management systems. So one would expect that the more ethnic/caste groups the population contained, the more controversial the situation would be and the more difficult consensus would be to achieve. In this way, ethnic/caste variation in Sallepakha might have contributed to the degradation of the forest. Though all groups are found in Betini, there are two major groups, which are of more or less equal position. It was also found that though no economic disparity was observed within the community, there still remained some sort of distrust between the two different caste groups. However this distrust may have some positive results. One of the key informants on Betini forest said "We have checks and balances between Brahman/Chhetri and Tamang communities. The Tamang community cannot commit excesses because of the fear of arguments from the Brahman/Chhetri community and vice versa. Thus it has helped maintain the forest properly."

Molnar (1981) concluded that lower caste groups are less willing to preserve communal forests, but Table 7.3 shows no significant difference between Sallepakha and Kamang in this respect. Furthermore, it was noticed during the field work that Kami and Damai communities, even from other areas, have access rights to the Kamang forest.

7.3.2 Demographic characteristics

The average rate of population growth has been 1.05% and 1.53% per annum for Kamang and Betini respectively over a period of 109 years, whereas the rate is 1.69% for Sallepakha over the last two decades. As the demographic studies (Poffenberger, 1980; HMG, 1987) have shown that the nation-wide rate has increased during recent years, the rates in the three areas may not have been significantly different if calculated over the same period.

Degradation and deforestation have been linked with the population growth (Bajracharya, 1983), but my study shows no strong evidence that population growth has had a major impact in changing the status of the forests.

7.3.3 Decision-making groups

While the role of household heads is dominant in reaching communal decisions, the role of other sectors of the community is also significant (Miller, 1990). Furthermore, the implementation and
effectiveness of decisions relating to communal resources depends greatly on the women of the community (Hoskins, 1980; Gronow, 1987; Chand and Wilson, 1987). Thus it has been determined that at least one third of the members of the users' committee should be women (HMG, 1988). For this reason Table 7.4 showing the age and sex composition of the local decision-making groups is presented.

**Table 7.4 Age and sex of household heads**

<table>
<thead>
<tr>
<th></th>
<th>20-30</th>
<th>30-40</th>
<th>40-50</th>
<th>50-60</th>
<th>60-70</th>
<th>70-80</th>
<th>80-90</th>
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<tbody>
<tr>
<td>Sallepakha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Male</td>
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<td>24</td>
<td>27</td>
<td>34</td>
<td>27</td>
<td>11</td>
<td>6</td>
<td>136</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>11</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>28</td>
<td>29</td>
<td>45</td>
<td>33</td>
<td>12</td>
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<td>165</td>
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<tr>
<td></td>
<td>(5)</td>
<td>(17)</td>
<td>(18)</td>
<td>(27)</td>
<td>(20)</td>
<td>(7)</td>
<td>(6)</td>
<td>(100)</td>
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<tr>
<td>Kamang</td>
<td></td>
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<td></td>
</tr>
<tr>
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<td>7</td>
<td>5</td>
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<td>27</td>
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<tr>
<td>Total</td>
<td>18</td>
<td>25</td>
<td>43</td>
<td>32</td>
<td>47</td>
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<td>(10)</td>
<td>(14)</td>
<td>(23)</td>
<td>(17)</td>
<td>(26)</td>
<td>(8)</td>
<td>(2)</td>
<td>(100)</td>
</tr>
<tr>
<td>Betini</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>21</td>
<td>23</td>
<td>19</td>
<td>21</td>
<td>8</td>
<td>6</td>
<td>112</td>
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<tr>
<td>Female</td>
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<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>25</td>
<td>23</td>
<td>20</td>
<td>23</td>
<td>9</td>
<td>6</td>
<td>121</td>
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<tr>
<td></td>
<td>(12)</td>
<td>(21)</td>
<td>(19)</td>
<td>(17)</td>
<td>(19)</td>
<td>(7)</td>
<td>(5)</td>
<td>(100)</td>
</tr>
</tbody>
</table>

The age distributions of household heads do not seem to be significantly different between the three areas. However the percentage of women household heads - 18, 15 and 7 in Sallepakha, Kamang and Betini respectively - are more variable and this may show that simply increasing the number of women in the decision-making group has no significant effect on stable forest management. Thus it is obvious that a mere invitation to women to participate in forest management will not suffice (Siddiqi, 1989). The situation calls for much extension work (Fisher and Malla, 1987; Cooper and Davidson, 1983), a narrower focus (Anon., 1987) and greater credibility and support by men (Gronow, 1987).

### 7.3.4 Landholding

Comparative figures for landholding patterns are given in Table 7.5, but they seem to bear no relationship to stable management of the forests.
Table 7.5 Landholding patterns (areas in ropani)

<table>
<thead>
<tr>
<th>Village</th>
<th>Khet</th>
<th>Pakho</th>
<th>Kharbari</th>
<th>Gharbari</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sallepakha</td>
<td>Mean.</td>
<td>18.32</td>
<td>7.13</td>
<td>0.32</td>
<td>4.61</td>
<td>24.62</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>19.51</td>
<td>6.65</td>
<td>1.24</td>
<td>4.36</td>
<td>24.38</td>
</tr>
<tr>
<td>Kamang</td>
<td>Mean</td>
<td>4.39</td>
<td>4.73</td>
<td>0.09</td>
<td>2.24</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>4.78</td>
<td>8.32</td>
<td>0.86</td>
<td>3.51</td>
<td>2.02</td>
</tr>
<tr>
<td>Betini</td>
<td>Mean</td>
<td>6.02</td>
<td>11.19</td>
<td>1.68</td>
<td>7.00</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>Std. dev.</td>
<td>13.03</td>
<td>13.89</td>
<td>6.34</td>
<td>6.41</td>
<td>22.49</td>
</tr>
</tbody>
</table>

Khet land is highest in area among the users of Sallepakha and lowest among the users of Kamang. As khet landholding is related to production of hay (rice straw), high holding of such land means more stock of fodder during the dry season, which may result in less dependency on fodder from the forest. Another factor could be that khet land is manured by chemical fertiliser, but this is a very recent phenomenon and on a very small scale.

Bajracharya (1983a; 1983b) concluded that deforestation is primarily the result of chronic food deficit, which results in pressure to clear forest for agriculture. Though attempts are not made here to study the food situation, it looks similar in all three cases. There are records of attempts to clear Betini forest but these were discouraged by the local users. On the other hand, in Sallepakha forest, similar attempts were discouraged by the district authority but were not stopped in the field. No attempts to clear Kamang forest were noticed, although the average landholding here is lowest among the three areas studied. Thus the present study does not support the assumption that deforestation is due to land clearing to meet chronic food deficits.

7.3.5 Animal husbandry

The livestock population (for all types) per household (see Table 7.6) is minimum in Kamang and is very much the smallest in the case of buffaloes. This again shows the relationship of fewer buffaloes with higher elevation. These figures are more or less similar to those found in other studies [APROSC (1979) carried out a study in Gorkha district and found the population per household to be 1.6, 2.1, 1.6 and 2.6 for buffaloes, cows, oxen and goats respectively. In a study done in Syangja, Tanahu and Gorkha, Kumar and Hotchkiss (1988) found 2.14, 1.75, 1.36 and 3.03, for buffaloes, cows, bullocks and sheep/goats/pigs respectively.], but they do not seem to show any relation with the management of the forests.
Table 7.7 Relative changes in use of forests
(percentage of households now to 20 years ago)

<table>
<thead>
<tr>
<th>Product</th>
<th>Sallepakha</th>
<th>Kamang</th>
<th>Betini</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest grazing</td>
<td>94</td>
<td>40</td>
<td>29</td>
</tr>
<tr>
<td>Fencing</td>
<td>61</td>
<td>133</td>
<td>88</td>
</tr>
<tr>
<td>Grass (thatching)</td>
<td>53</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Leaf-litter</td>
<td>50</td>
<td>178</td>
<td>136</td>
</tr>
<tr>
<td>Fuelwood</td>
<td>35</td>
<td>156</td>
<td>142</td>
</tr>
<tr>
<td>Plate-leaves</td>
<td>33</td>
<td>-</td>
<td>150</td>
</tr>
<tr>
<td>Jhikra</td>
<td>28</td>
<td>92</td>
<td>65</td>
</tr>
<tr>
<td>Timber</td>
<td>25</td>
<td>73</td>
<td>87</td>
</tr>
<tr>
<td>Shed-poles</td>
<td>25</td>
<td>100</td>
<td>116</td>
</tr>
<tr>
<td>Danda-bhata</td>
<td>20</td>
<td>27</td>
<td>79</td>
</tr>
<tr>
<td>Tool Handles</td>
<td>18</td>
<td>285</td>
<td>156</td>
</tr>
<tr>
<td>Fodder</td>
<td>13</td>
<td>75</td>
<td>83</td>
</tr>
<tr>
<td>Halo</td>
<td>11</td>
<td>280</td>
<td>147</td>
</tr>
</tbody>
</table>

Table 7.8 Relative changes in use of private land, particularly bari
(percentage of households now to 20 years ago)

<table>
<thead>
<tr>
<th>Product</th>
<th>Sallepakha</th>
<th>Kamang</th>
<th>Betini</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stall-feeding</td>
<td>420</td>
<td>266</td>
<td>292</td>
</tr>
<tr>
<td>Fencing</td>
<td>193</td>
<td>271</td>
<td>160</td>
</tr>
<tr>
<td>Grass (thatching)</td>
<td>147</td>
<td>130</td>
<td>139</td>
</tr>
<tr>
<td>Leaf-litter</td>
<td>284</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>Fuelwood</td>
<td>1425</td>
<td>1400</td>
<td>150</td>
</tr>
<tr>
<td>Plate-leaves</td>
<td>300</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jhikra</td>
<td>392</td>
<td>1640</td>
<td>206</td>
</tr>
<tr>
<td>Timber</td>
<td>400</td>
<td>190</td>
<td>220</td>
</tr>
<tr>
<td>Shed-poles</td>
<td>272</td>
<td>366</td>
<td>145</td>
</tr>
<tr>
<td>Danda-bhata</td>
<td>332</td>
<td>575</td>
<td>190</td>
</tr>
<tr>
<td>Tool-handles</td>
<td>238</td>
<td>250</td>
<td>128</td>
</tr>
<tr>
<td>Fodder</td>
<td>200</td>
<td>200</td>
<td>138</td>
</tr>
<tr>
<td>Halo</td>
<td>138</td>
<td>300</td>
<td>150</td>
</tr>
</tbody>
</table>
Table 7.6 Livestock type and population

<table>
<thead>
<tr>
<th>Villages</th>
<th>Buffaloes</th>
<th>Cows</th>
<th>Oxen</th>
<th>Goats/sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sallepakha</td>
<td>Mean 1.67</td>
<td>1.70</td>
<td>1.81</td>
<td>3.95</td>
</tr>
<tr>
<td></td>
<td>Std dev. 0.89</td>
<td>1.03</td>
<td>0.74</td>
<td>2.62</td>
</tr>
<tr>
<td>Kamang</td>
<td>Mean 0.32</td>
<td>1.04</td>
<td>0.99</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td>Std dev. 1.35</td>
<td>1.62</td>
<td>0.79</td>
<td>2.27</td>
</tr>
<tr>
<td>Betini</td>
<td>Mean 1.91</td>
<td>1.43</td>
<td>1.15</td>
<td>2.90</td>
</tr>
<tr>
<td></td>
<td>Std dev. 1.41</td>
<td>1.73</td>
<td>0.91</td>
<td>2.48</td>
</tr>
</tbody>
</table>

However if we compare the figures for Betini and Sallepakha (which are similar in ethnic/caste group and in landholding), it is clear that buffaloes are higher in Betini and other types of livestock are higher in Sallepakha. Buffaloes are mostly stall fed whereas the others are grazed (Fox, 1983). This may be one of the responses to the effectiveness of the local system of forest management in Betini, where people recognised the grazing as an inhibitive factor for forest regeneration and prohibited it in the recent period.

7.3.6 Changes in use of the forests with time

Attempts were not made to quantitatively analyse the dependence of users on the forest. Every household, in all the areas, relies on the forest to some extent, depending on the products available. Similarly, almost all households except for the landless, have some private resources to supplement their forestry needs. The information collected on these aspects is based on the major portion of the supply for each specific forest product. Table 7.7 shows the percentage of the user households now using the particular forest calculated on the basis of the corrected number of users 20 years ago, for the various forest products. Table 7.8 provides similar data for products from private land.

It is clear from Table 7.7 that the major decline in the use of Betini forest is for forest grazing. This remains the highest use in Sallepakha, and reflects the absence of management there. Otherwise the changes in Betini are not great; they are more extreme, upwards and downwards, in Kamang; in Sallepakha use of all products is declining. The figures show the increased potential of managed forest resources to sustain the supply of forest products for increasing users.
7.4 TENURE AND OWNERSHIP OF FORESTS

Local people expressed the view that the Betini forest land was under the *guthi* of Machchhendranath in the earliest days and that later it was under *birta*, as is attested also by the document D23. But there is no evidence of any conflicts related to land ownership and tenure.

Kamang was under the *bekh* land tenure, while Sallepakha was under *raikar* and was allocated under *jagir* tenure. Whatever the land tenure may have been, the managing responsibility was formally handed over to the local people and functionaries.

After the enactment of the Private Forest Nationalisation Act in 1957 (HMG, 1957), the legal status of all of these forests became government forest. But the local understanding of this change has been different in the three localities. The Act adversely affected behaviour in Sallepakha, whereas no impacts could be found in Kamang, and in Betini local people submitted applications opposing the nationalisation of the forest even up to 1982. Thus the functioning of a local management system seems not to be related to officially recognised land tenure and ownership (Gilmour, 1990). The effect of the legislation also varied with the community.

7.5 CENTRAL INTEREST IN THE FORESTS

Betini had been the subject of central interest since the earliest days of known history; Sallepakha was added to the central list only in the beginning of this century, although it was used by *jangi-pareth* since they were stationed there in 1879; while Kamang has never been of interest to the central authority.
7.6 ACCESSIBILITY AND LOCATION OF THE FORESTS

Sallepakha is the most remote of these three forests so far as a modern transport facility is concerned. Betini has been accessible by all-weather road for three decades, while Kamang is located within a two-hour walk from an all-weather road constructed within the last decade. Thus it seems clear that recent road access and modern transport does not correlate with the degree of existing degradation or management of the forests.

7.7 OUTSIDE INTERFERENCE

The documentary evidence of external involvement in the management is oldest in the case of Betini forest and absent in case of Kamang forest. However external interference was heavily and continuously imposed in Sallepakha.

7.8 RESISTANCE TO THE ATTACKS

The southern part of Sallepakha which is lowest and close to Miltikhola was already reclaimed for khet before 1908 but this was still controversial. There is no evidence of efforts to revert this land to forest. Some more land in the same part was registered as khet in 1924. In the early 1940s, subsequent attempts were made to reclaim Sallepakha forest. These were reported to the authority and it was decided to revert the land to forest in 1951. The situation of the forest since then has been explained under section 6.3.3. The whole history of Sallepakha reveals the absence of any strong local institution to manage the forest or protect it from such attacks.

Kamang forest has not had to face encroachment or threat of reclamation of the land. However illicit felling has occurred a couple of times. A serious case occurred in 1954 and had to be dealt with by the higher authority. The others were dealt with locally (see Appendix VIII).

Though the detail is still not known, the order of 1797 (D9) shows that trees were being cut in Betini forest. The penalties which were imposed reveal the seriousness of the practice. However there were not any attempts to encroach on this forest till the 1930s. These attacks and the local reactions to them are described under section 4.3.7. Thus whenever Betini forest has came under attack, local people have defended and succeeded in protecting the status and the condition of the forest. They not only prevented attack by other individuals but also put pressure on the central authority to avoid nationalisation of the forest.
7.9 SIZE OF USER GROUPS

The size of the user groups of Betini and Sallepakha ranges from 450 to 500 households whereas it is at most 160 households in Kamang forest. In fact the responsible users of Kamang number only about 60 households.

7.10 SUPPORT AND ENCOURAGEMENT FROM THE AUTHORITIES

There are two indications of support by the authorities specifically regarding the management of Sallepakha forest. The first is the sanad issued in 1908 (Appendix IX) and the second is the decision paper of 1951 (Appendix XI). The former shifted the responsibility to the local people and the latter secured the forest from encroachment.

Kamang was allocated for the use of Multol residents when the land in the area was allocated. Though the local effort to obtain a sanad for that forest was vigorous, it was not successful, probably because of opposition or inaction on the part of the district authority. However, the action taken against the offenders in about 1954 secured the forest against being degraded.

There are evidences of support of higher authority for the management of Betini forest. The order issued in 1797 instructed the local functionaries to inform all the users to protect it. The order issued in 1904 also gave responsibility to the local functionaries. Again the decision of the district goswara recognised the local interest in the late 1930s. Such supports by the authorities was offered whenever attacks were anticipated.

7.11 LOCAL COMMITMENT

Local commitment is very poor in Sallepakha, whereas it is high in both the other forests. A talukdar initiated the management in Kamang forest, but it was not the talukdar only in Betini. This is reflected in the applications and the orders relating to the Betini forest.

7.12 FOREST USE

The use of the forest is dynamic in all the forests. Local arrangements reflect this dynamism in Betini and Kamang forests. In this way, the collection of fodder and grazing, for example, has been prohibited recently in both the forests. There is no record of any permit being issued by the forestry authority for forest products from Betini forest. There was one such instance in Kamang but this was finally controlled by the local users. However official permits are always needed to take timber and other wood products from
Sallepakha forest, whereas other products such as grazing and collection of fodder are uncontrolled except in the plantation areas. But the practice is different from the regulations and even timber is collected indiscriminately in Sallepakha (see section 6.3.4.6).

7.13 MARKET SYSTEM WITHIN THE USERS

Many of the households of Sallepakha now depend on buying various items, even though they are mostly the products from their own forest: (23 out of 155 for fuel wood, 43 out of 137 for timber, 29 out of 136 for shed material, 26 out of 146 for roofing, 43 out of 146 for leaves for plates, 50 out of 152 for handle for agricultural implements and 65 out of 113 for timber for ploughs, of which only the last three products come mostly from other forests). This trend is increasing and has already created a market system among the users, whereas among users of Betini and Kamang, buying forest products is uncommon. However, 22 out of 82 users of Kamang (including the 'other users') are presently buying timber for ploughs, which comes from government (the people's interpretation) forest. This reveals that users of Sallepakha are encouraging poaching by paying for their own products, which reflects the eroding sense of ownership among the users.

7.14 PERCEIVED NEEDS

Molnar (1981), Gautam (1987), Gilmour (1990), Metz (1990), Pandey and Yadama (1990), Jackson (1990) and Griffin (1991) have noted the direct relationship between shortages of forest products and the initiation and functioning of an indigenous system of forest management. However, although in the three cases in the present study, the needs appear to be the same, no management system developed in the case of Sallepakha forest.

7.15 COMMON PROPERTY RESOURCES

All three forests possess the first of the following three characteristics of common property resources as defined by Blaikie and Brookfield (1987), namely: (i) they are subject to individual use but not to individual possession, (ii) they have a number of users who have independent rights of use, and (iii) the users constitute a collectivity and together have the right to exclude others who are not members of that collectivity.

Only Betini and Kamang have the other two characteristics, since Sallepakha forest is used mainly through the permits issued by an external authority, the DFO, whereas similar permits in the other two forests have
been rejected by the local users. This practice of using the Sallepakha forest illustrates lack of any collectivity of users. Moreover, part of Sallepakha has been converted to private crop land through the joint efforts of some users and local functionaries.

7.16 ACCESS TO THE AVAILABLE RESOURCES

Some studies (Acharya, 1984; Prasai et al., 1987; Gurung, 1988; Pandey and Yadama, 1990; Ramble and Chapagain, 1990) have shown that when specific forests are protected local needs may be met from other forests, i.e. forests are protected and not used at the expense of other forests. In the two managed forests of this study, this is not the situation, as both these forests are in daily use so far as the local needs and supply from the forests are concerned. However it was noticed in Kamang that during the early days of its management, local pressure was diverted to the government (the local people's interpretation) forests (see section 5.3.2.3).

7.17 LOCAL LEADERSHIP

Local leadership is described as a major factor in the effective functioning of an indigenous system (Molnar, 1981). In Kamang, the management system was initiated with the active leadership of a local functionary. In Betini, although there is no firm evidence, some key informants stated that local functionaries initiated the system. Documents (Appendices IX, X) indicate that jangi-pareth initiated the protection and regulation of the Sallepakha forest. Though a local person was in an influential position in the jangi-pareth, it was his external authority rather than his local leadership which initiated that development.

7.18 GEOMORPHOLOGICAL FEATURES

Zurick (1990) noted, on the basis of a study in a village in western Nepal, that villagers recognise and capitalise on geomorphological features such as aspect and steepness of slopes in management of their land. He encountered more forest on the steeper land, and on western and south-western aspects.

The slopes of all three forests in my study are not steeper than surrounding now-forested areas except for a few locations. Sallepakha and Kamang are on southern aspects or slightly towards the east and Betini is on a northern aspect. In all three cases the forests and surrounding non-forested land have the same aspects.
7.19 DEGREE AND NATURE OF FACTIONALISM

It is difficult to find any community without factions, and the nature and effects of the factions are worthy of study. In Betini there are factions between the communities (see footnote under section 7.3.1), hamlets and political units but, until recently, all were united so far as controlling indiscriminate use of the forest is concerned. People evaluate their leader according to the effectiveness of the management of the forest. There was never controversy over the ownership and access rights between the users of different hamlets until recently, when one group of users received an award from an outside agency, and the other group did not.

In Kamang also, as explained, there are factions between the users from different villages. But since the beginning of land allocation, the people from Multol were recognised as the users of the forest by rights. So the users from other villages do not abuse their position but only use whatever is permitted to them.

In Sallepakha, there seems to be no distinct factions as in the other cases, although some people argue that the forest degraded rapidly when the local panchayat officials were from among the non-users.

Thus, competition between local factions has some positive effects in Betini and Kamang, as they use forestry as an example of their progressiveness and try to outdo one another in carrying out management practices (Molnar, 1981).

7.20 OFF-FARM EMPLOYMENT

The proportion of off-farm employment in Kamang is the highest for the three areas, and possibly significantly higher than for the hills region in general. It has resulted in a decrease in the population of livestock, ultimately indicating that users of Kamang are trying to escape out of subsistence farming. This situation is helping to break down the general idea that land equals wealth (Burch, 1987). It has facilitated the creation and maintaining of forest plantations on their grazing lands.

7.21 LINKAGES AND COMPLEXITY OF THE VARIOUS FACTORS

It is clear from the foregoing discussion that achieving stable forest depends on many complex factors. Most of these factors, such as livestock types and population, changes in forest use, involving women in decision-making process, resistance to external impositions, local commitment,
control of local marketing of forest products, and leadership and factionalism regarding forest management, are under the control of local people, but are inter-woven with each other to various degrees. These are all aspects of local involvement in the well-being of the forest. However increasing the supply of forest products through modifying and improving the make-up of forests and preventing impositions from outside are other important factors relating to the stable management of forests, and involvement of national forestry institutions may be of significant assistance in these regards. Although ethnic/caste compositions seem related to stable management, these cannot be changed immediately and will probably continue to cause day-to-day complications of various kinds.
8. CONCLUSIONS AND IMPLICATIONS FOR FUTURE POLICY

8.1 CONCLUSIONS

This research has demonstrated the existence of significant evidences of codes of practice relating to the forestry of Nepal, in the period prior to external influence. Furthermore, it has shown that these codes varied from region to region, and generalisation concerning such codes for the whole country would lead to gross error. Analysis of these codes suggests categorisation on the basis of geographical region. The following distinct categories can be justified on the evidence presented in this thesis. (As the study is mostly concerned directly with the hills region, the aspects of management in that region are discussed in more detail, and only brief notes are made regarding the forests of other regions).

8.1.1 Kathmandu valley and adjoining areas

Forests in and around Kathmandu valley were severely affected after unification by the demands of ruling elites. They were never seen from the perspective of local people. Mainly these forests were used for purposes of armaments and ammunition manufacture, but they were also used for building temples and palaces. They also suffered severe pressure from the great numbers of people who came from further afield during the construction period, and to work for the government or ruling elites. Later these forests were mostly possessed by the members of the ruling families.

8.1.2 Tarai and inner Tarai region

Tarai forests were heavily exploited for revenue, at least after unification. So efforts were directed at increasing the revenue rather than managing the forests. Phases of this expansion could be traced as following.

The government initiated the timber trade by sale in Calcutta, most probably before the end of the 18th century.

The massive export of timber developed after establishment of kathmahals in the districts and kathmahal-bandobast-adda in the centre in 1860. It proceeded in the far-western Tarai in the first phase and in the central and eastern parts later. Finally, these areas were opened for settlement. However, the settlement programmes were also motivated by earning or increasing revenue.
All the authority for decisions regarding the sale of timber was centralised. In all such decisions, there was always full involvement of ruling elites. The continuation of any office or officer depended on the revenue extracted for the government. This practice remained effective till recently, and it eventually subverted the proper role of a professional forester even after the forest department was equipped with such personnel. Thus the degradation of Tarai forests is the result of government policy.

8.1.3 Mahabharat region

Forests in the Mahabharat region were used for defence purposes. The forests were encouraged to grow, particularly over the tracks, until the end of the early Rana period. Thus any degradation of the forests of this region occurred in more recent times.

8.1.4 The hills region

Customary and indigenous rights existed throughout the hills region in early times. They were related to: (i) forest use, (ii) pasture, and (iii) soil and water conservation, and were documented only when existing practices were challenged. However forests located near the mines were affected by their use for ore smelting. My studies show that there is a long history of interaction between the state and the local communities concerning these resources. On the basis of the documentary analysis, the following features are revealed relating to forestry in the hills region.

a. Most of the orders issued relating to forestry, particularly protection and use, in the hills region were issued on local request. Although such orders give the impression of being impositions from the centre, they were in fact responses to requests for the resolution of problems.

b. Documents relating to local usage rights nearly always evolved from challenges to customary practices of unknown origins. The continual interactions of petitions and royal orders were reflected in the legal code of 1854 and in its subsequent amendments.

c. The *ban-goswara* was established before the end of the 19th century, with the objective of dealing with forestry issues in the hills region.

In 1907, a policy was approved to hand over all forests of the hills region to local functionaries and people. This began to be implemented in the east in the first phase, in the west in the second phase and over the whole hills region in 1913. This process in relation
to forest on raikar and jafati land was incorporated in the legislation in 1918 and amendments in 1935 and 1948. This legislation was repealed through enactment of the Forest Act of 1961 (HMG, 1961).

Handing over authority from the state to local functionaries and people for the use and protection of individual forests was to be approved by the central authority.

Decision-making authority regarding the distribution of products from the forests in the hills region was always entrusted to the local people, whereas the central authority retained the right in the case of Tarai forests. In the case of forests around Kathmandu valley, the authority lay with the prime minister in the pre-Rana period, and later they were mostly converted to birta of the ruling elites. However, in the hills region, the extraction of forest products for government works was to be done only according to orders issued from the centre. (This meant that local functionaries and district authorities had no authority to encroach on local forests on the pretext of obtaining materials for public or government works away from the community).

For the first time, a code was developed in 1907 to regulate the timber for local people by government offices. However this proved impracticable and so the code was replaced by empowering local functionaries and people (banpala-sanad).

d. District goswaras dealt with legal cases relating to forestry disputes in the hills region.

e. Throughout the history sketched here, there is not a single evidence of a levy being charged on forest products used by the people in the hills region, although charges were levied in other regions, particularly the Tarai (D78).

The government never expected any revenue out of the forests of the hills region. However, bows and quivers were sometime supplied from the region.

Export of medicinal plants to India occurred from at least the late 18th century.

f. Only local functionaries and people were entrusted with managing the forests of the hills region and were never paid, whereas salaried people were involved in the management of forests in other regions.
The following groups of people were involved in the management of forests in the hills region: local functionaries, land-owners, chitaidars, elite groups, ethnic/caste groups communities and other inhabitants. Most of the people empowered by the orders were the petitioners, of which most were from the Brahman/Chhetri community.

g. The main reason given for the management of forest resources is their protective role for the land, including conservation of water for irrigation purposes. It was most effective to delegate the government's authority to a local person, because indiscriminate action in the forest might lead to that person's land or channel being damaged.

h. Deliberate reclamation of land in the hills involved conversion of waste land into paddy land, but not necessarily from forest land. However, the process of degradation existed throughout the history, as is reflected in many of the petitions. On the evidence of these documents, the reduction of the forest area was probably due to progressive degradation rather than to deliberate clearing.

i. There was no external support, such as funds or manpower, for the management of the forests by local people in the hills region in the past.

j. The uses of communal forests are changing. The trends are in the same direction in two of the forests, Betini and Kamang, but are different, regarding some products, in the Sallepakha forest. The numbers of households using the forests for firewood, leaf-litter and agricultural implements are increasing in the case of the first two forests but decreasing in the third, possibly because of an absolute shortage of products. Similarly the numbers of households using the forests for pasture have been reduced drastically in the first two cases but have increased in the third, where grazing is uncontrolled.

k. The tendency to depend more on private resources has developed among the users of all three forests. This is also true elsewhere (Carter and Gilmour, 1989)

l. The use of the forest products is dynamic both in type and quantity of the products. So calculations based on static figures have limited validity, and invite uncertainty (Thompson et al., 1986).
m. If the users are to be effective in forest management, the user groups empowered must accord with real rather any political or administrative boundaries.

n. Outside interference in local management needs to be very cautious, otherwise it could be disastrous.

o. Regulation of forest products from the locally managed forests should not be carried out by any outside agency.

p. In Betini and in Kamang, local people are felling trees according to their own decisions. They have no problems with the outside authority.

8.2 FUTURE POLICY IMPLICATIONS

Many orders issued in the past by higher authorities were consistent with objectives stated in the recent master plan for the forestry sector (HMG, 1988) such as:

- To meet the people's basic needs for fuelwood, timber, fodder, and other forest products, on a sustainable basis.

- To contribute to food production through an effective interaction between forestry and farming practices.

- To protect the land against degradation by soil erosion, floods, landslides, desertification and other effects of ecological disturbance.

So far as hill forests were concerned, past policy was more liberal (i.e. more authority to users) than the one envisaged in the recent Master Plan (HMG, 1988), which states:

Forests near villages will be managed with the people's participation. The primary task of the government field staff will be to assist and advise people in their efforts to manage and utilize the forests on a sustained-yield basis. The present uncontrolled use of forest products will be gradually eliminated by promoting the establishment of permanent users as managers of the forest resources. The ancient right to collect fuelwood and fodder [timber and other products?] free of charges will be regulated by people's decisions and management plans.
Similarly in the past, forests were being handed over to the people and functionaries, as is now (HMG, 1988) defined as a strategy for social sustainability:

Phased handing over of all the accessible hill forests to the communities, to the extent that they are able and willing to manage them.

It is clear now, from all this evidence, that recently defined objectives, policy and strategy (HMG, 1988) have existed in the hills for a very long time and have been reflected in the legislation. It is clearly shown that there were various kinds of local management of forest resources although there were the same policy, legislation and socio-economic situations. This suggests that policy and legislation have very little relation to the practice of stable forest management in the hills region.

The case studies show that not only is local management possible and effective, but that it may be essential. Such management can keep the forest stable despite changes in the population density, access by modern transport to the forests or external interference. Elsewhere (Gilmour and Fisher, 1991) it is stated that community forestry is the most viable option to ensure that hill farmers can control and manage their forests in a sustainable fashion.

It is evident from the foregoing discussion (chapter 7) that effectiveness of local management depends on local people. All these factors mentioned above can be favourable to local management only if the local people are committed. So, unless the local commitment is high, other efforts will have little impact. The following aspects of the historical record are significant in this regard:

- All the documents issued from the centre regarding the codes of practice, whether of the forest studied or elsewhere in the hills region (Mahat, 1985; Acharya, 1990; Adhikari, 1990; Bhattarai, 1985; Fisher et al., 1989) were in the possession of the local functionaries of the time. Though the intention was to empower both the local people and functionaries, the means used empowered only the functionaries. None of the studies have shown the effectiveness of this system beyond the local functionaries because other people did not know what was in the documents.

- The district authorities were reluctant to hand over power. Though they completed the formalities, responsibility for forests was not really handed over to the local people. In fact, sincerity in handing over of
responsibility is still lacking, even in the central authority (Gautam, 1991).

- Only those functionaries who had an interest in protective management were effective.

- Local functionaries were not only made responsible for forest protection but they also had authority to issue permits for converting waste land into crop land and to register the land as being in private ownership. The possibility of corrupt practices is obvious.

Thus past policies devolved effective power only down to the local functionaries, and not to the general mass of the users. This research therefore suggests the need for full involvement of all members of user groups. The emphasis should be further directed to avoid capturing of the process by elites.

Some studies (ICIMOD, 1989; Fisher, 1989) have cast doubt on the ability of local institutions to solve complex problems of forest management. The users of Betini and Kamang, however, are changing their management practices according to the changing situation. Their attempts always have been directed towards adopting simple ways and means to keep the forest stable. The resources (time, labour etc) available in their own communities are also limited. If user groups are to be effective, rules and regulations must be simple and, where possible, in accord with existing local practices. It is shown by the evidence that when they were confronted with the complexities of fodder regulation, the local people decided to ban fodder collection from the forests altogether. The approach of prohibiting local people from using the forest will not be a desirable solution. Thus the local institutions need to be supported in resolving the complex issues of forest management.

Now the questions arise: how can the local institutions be supported? and who are the appropriate people to deal with such issues? In order to enhance local management of forest resources we first need to know what social and technical knowledge is already available (Gilmour and Fisher, 1991). The situation is undoubtedly complex and has been only partly analysed (Ives and Messerli, 1990; Thompson et al., 1986; Blaikie and Brookfield, 1987; Griffin et al., 1988). Even in the small number of case studies undertaken here, there is great diversity. In Sallepakha, for example, the degradation is so devastating that simply either protecting the forest or prohibiting its use (which is not possible anyway) offers no solution.
External support is required to increase the resource base. Whereas it is different in Kamang and Betini. In the former, local people have managed to apply their traditional management practices to the newly created plantations. In the latter, local people are still able to sustain their forestry needs without any external support.

Throughout the periods covered by this study, local institutions have not shown any indication of being capable of increasing forest resources through afforestation (except propagation of fodder and fruit trees on a small scale) of communal land but, always, were involved in protection and management of existing forests. So if the resource base needs to be developed significantly through afforestation, communication of evolving technical know-how may be of significant help. Thus, resource management in this region requires a close partnership and a bridge between villagers and farmers as resource managers, on the one hand, and resources specialists of many kinds, as skilled technicians, on the other (Messerschmidt, 1990). This will help in realising the potential of recent developments in science and technology relating to forestry issues. However applying the new knowledge might need significant manpower and funds. As is clear from historical and existing management norms, local people do only what they can afford to do. In such circumstances, they may not be able to organise the necessary resources by themselves so may have to receive external funding. But external resources should not be imposed beyond the will and capacities of the local institutions, and so become a burden rather than a benefit to the users.

There has to be much more care in formulating and implementing new plans and programs. At the present time, many projects are being developed and implemented in the forestry sector, with varied objectives and approaches. There is too often the danger of destroying indigenous systems in the process of creating either new plantations or new institutions. As the projects are usually funded for short periods, normally of five years (very few are consistently working for long period aiming to create a sustainable local systems), they are likely to leave, at the end of the project period, only partly completed forestry developments without having developed the local capacity to manage them properly. This takes a long period of action and interaction. The result is partly an added burden to the local people.
The study thus shows that technical knowledge alone is not enough for managing the forest resources of the hills region. However, it is not possible, in the present situation, to achieve the state of stable forest in its absence. It is thus clear that two approaches from different origins are emerging in the forestry of the hills: one is based on indigenous forestry improving its effectiveness through the support of technical inputs and the other involves conventional forestry adapting to fit into the indigenous system. Forestry authorities need to consolidate these two approaches in order to achieve stable forests most successfully across the whole hills region. This necessitates forestry professionals turning from being technocrats within the framework of bureaucratic organisation to being technicians sympathetic to and adapting themselves to the needs of local people and institutions.
GLOSSARY OF NEPALESE WORDS AND TERMS

aathban : eight forests.
abal : top quality, generally used in relation to land and trees.
adalat : judicial court.
adalat-goswara : central court of justice.
adda : office.
adhiya : a system of share cropping in which owner and cultivator take equal amounts of the yield. It is applicable in cultivation and livestock rearing.
ailani : land good for cultivation but not reclaimed.
ain : Act.
akarnapatra : application prepared through understanding among the persons involved.
amal : village court.
amali : chief of amal.
amalidar : see amali.
amanat : a system of functioning any work departmentally, through salaried employee.
amanat-tahasil : revenue collected through government employees.
amanat-tahasil-adda : office collecting revenue through government employee.
anna : 4 paisa makes one anna.
Asad : third month of Vikram year i.e. mid-June to mid-July.
asmani : income from judicial fines.
Aswin : sixth month of the Vikram year i.e. mid-September to mid-October.
bad-karar : period after expiration of a contract.
bada-hakim : chief administrator of a district.
badi : dark fortnight of the lunar calender.
bagar : land on the bank of a stream or river once washed away or covered by flood.
baise : group of twenty-two.
Baishakh : first month of the Vikram year i.e. mid-April to mid-May.
bali-kut : rent fixed on crop.
ban-goswara : central office concerning forests of the hills region.
ban-janch-adda: forest inspection office.
bando bast: management.
baniboti: tenant's share of crop.
bankar: tax on forest products.
banpala: maintenance of forest.
banpala-daskhat: document conferring authority for forest protection.
banpala-sanad: order issued by the government for forest protection.
banpala-sanad-rukka: banpala-sanad issued by the prime minister.
bari: cultivated land (although it is often used to denote upland, in general terms it denotes any cultivated land, e.g. gharbari, ukhubari. So I have used it to denote any private cultivated land, including kharbari.)
bazaar-adda: office established to administer a town area.
begar: compulsory unpaid labour for porterage services.
bekh: a category of birta.
bekhwala: bekh-owner.
besi: area at lower altitude in the hills region.
beth: compulsory unpaid labour for agricultural purposes.
Bhadra: fifth month of Vikram year, i.e. mid-August to mid-September.
bhakari: mat made of bamboo splits and used for storing grain or sometimes used instead of planks.
bhansar: customs duties.
bhansari: individuals appointed to collect customs duties.
bhardar: a member of state council or nobility.
bhardari: supreme judicial court.
bhata: rafter.
bichari: a judicial officer, also used for people who have retired from this post.
bigha: an unit of land area equivalent to 0.67 ha.
bigo: value.
bijan: land registered on basis of seed needed to plant the area.
binayapatra: see bintipatra
bintipatra: an application to the king or prime minister
birta: land granted tax-free (partially or fully), as reward or as favour.
biset: people appointed to manage temples.
bitalab: a category of birta in which holders are usually under an obligation to provide some specified services when required.
bosi: lumber worker
boti: share
Brahman: the highest caste in the Hindu religion.
chahar: lowest grade of quality for land, trees, etc.
Chaitra: last month of the Vikram year, i.e. mid-March to mid-April.
chalani-adda: office created to forward timber from Hetauda to Kathmandu for the palace.
chaprasi: peon, orderly, also forest guard.
chardam-theki: cash levy on individual plots of paddy land in the hills region.
chaubardi: larger size of bullock cart.
chaubise: group of twenty-four.
chaudhari: headman of a mauja.
chauki: checkpost.
chaukidar: person employed in a check-post. It is also used to denote forest guard.
chautara: resting place made of stone and with trees for shade. Mostly Ficus religiosa and F. bengalensis are planted in the hills region.
chautariya: A principal officer of state (the office is a sinecure held by members of the royal family).
chhalahi: tax on skins and hides.
chhap: A category of life-time birta.
Chhetri: a caste in the Hindu religion, just below the Brahman.
chirpat: billet of wood used in between the beams for making the upper floor of a house.
chitaidar: care-taker.
chumawan: a levy imposed during the sacred-thread ceremony of king or prince.
chungi: small portion of anything paid as tax.
chuya: splits from bamboo or nigalo stems.
dadani: cost for extraction of timber.
dalín: beam used in making the upper floor of a house.
Damai: occupational caste of tailors and musicians.
danda-bhata: rafters and purlins for roofing.
dariyabudi: timber floated in the river.
daroga: A subordinate police officer.
daruwa: firewood (used mostly in documents of the Rana period).
dasain: biggest Hindu festival celebrated annually in September or October.
daudaha: people deputed for inspection and supervision from the centre.
Devanagari: the script in which Sanskrit and Nepali are written.
devodaru: Cedrus deodara, but formally a colloquial term for conifer.
dhakre-: people without any committed appointment.
dhani: owner.
dhaniboti: owner's share of crop.
dharmasala: shelter made for religious purposes, mostly at a religious site.
dharni: weight unit equivalent to about 2.4 kg.
dhiki: dehusking implement made of wood
dibya-upadesh: royal directive from King Prithvi Narayan Shah.
diojo-birta: a category of birta offered mostly to princesses of the ruling family.
ditha: judicial officer.
diyalo: billets of pine used for torches.
dobardi: smaller size of bullock cart.
doke: household.
doko: basket made of bamboo splits.
doyam: second quality after abal.
duichhape: document bearing the seal of the Prime Minister and the Commander in Chief.
dun or dhun: valley.
duniya: country men
duniya-raiti: see duniya
dwar: gate, but it is used to denote the port of export of timber, usually a river port.
dware: local functionary.
Falgun: eleventh month of Vikram year, i.e. mid-February to mid-March.
gadhi: key point established for defence purposes.
gadi-mubarak: a levy imposed during coronation of a king.
gadpatra: document of consolidation among various individuals or groups.
gandi: quality of metal used in coin.
gauchar: pasture land.
gaun: village.
gaunda: an administrative district with a military cantonment at its headquarters.
gaurung: local functionary.
ghadi: period of time equivalent to 24 minutes.
ghansi: fodder supplier.
gharbari: homestead.
gharbuna: clothes made at home.
ghargani: homestead taxes in the Tarai.
Gharti: an ethnic/caste group.
ghatta: grinding stone operated by water flow.
ghiu: dehydrated butter.
ghiukhane: a tax levy on paddy land in some hill districts.
ghochha: small-size timber, usually from branches.
ghyang: temple of a Tamang community
Giri: an ethnic/caste group to which most of the saints belong.
gol: charcoal.
gol-daura-rakam: obligation to supply charcoal or firewood.
gosthi: council, later it became guthi.
goswara: office of the bada-hakim in a district
goth: cattle-shed, or land where livestock are kept.
goddhuwa: levy imposed during the marriage ceremony of a royal prince.
gulm: a company of police or army.
gurau: most senior member of a community, or expert in shooting.
guru: teacher.
Gurung: an ethnic/caste group, mostly settled in the western hills region.
guthi : lands endowed to temples, monasteries and other religious and philanthropic institutions or for similar purposes.
guthiyar : families of the same guthi.
hakim : person in charge of an office.
halo: plough
hat : unit of length, measured from the elbow to the top of the finger, equivalent to 45.7 cm.
hat weekly market.
hatisar : elephant depot.
hawaldar : a military rank.
hudda : peon.
hukum-marji : verbal command.
hulaki : mail carrier (person).
ijara : a contract for collection of revenue, exploitation of mines etc.
ijaradar : a revenue farmer; holder of an ijara.
ilaka : sub-division of a district or territory.
istihar : gazette notification.
itachaple : name of a court.
itachapli-adalat : see itachaple.
jafati : birta land which had been made taxable in 1806.
jagir : government employment, which remuneration usually in the form of a piece of land from which produce or revenue was enjoyed by the employee, but sometimes in cash also, or partly in kind and partly in cash. (The term was also used to denote the total salary of a person in kind and/or in cash.)
jagirdar : a government employee; beneficiary of jagir land.
jamadar : a military rank.
jaman-bandi : document of surety.
jangi : military
jangi-megjin : munition factory
jangi-megjin-rakam : obligation to be supplied to munition factory
jangi-pareth : militia or para-military force.
Jestha : second month of the Vikram year, i.e. mid-May to mid-June.
jethabudha : senior member in a community, village headman in some areas or an official at the royal palace.
jhara : compulsory unpaid labour.
jhikra : branches of trees used for giving support for vegetable of climbing nature.

jholanga : suspension bridge

jhora : forest containing inferior varieties of timber

jimidar : local functionary in the Tarai.

jimmuwal : a revenue collector in the hill districts.

jummuwal-mukhiya : local functionary.

kabuliyatnama : document of confessions or agreement

kachahari : village court.

kaji : a senior post or a title given to nobility.

Kami : occupational caste of blacksmiths.

Kampani : Indian currency.

kapardar : minister of the king's or ruling elite's household.

kasthapatra : document carved in wood, sometimes it denotes a document relating to the wood.

kathbana : trees good for timber.

kathmahal : government-owned or controlled depot responsible for the cutting and export of commercially valuable timber from trees with a girth of more than 3 feet each, as well as of other forest products.

kathmahal-bandobast-adda : central office for forest administration in the Tarai.

Katik : seventh month of Vikram year, i.e. mid-October to mid-November.

kausal-adda : council office.

kausi-tosakhana : government department dealing with the expenditure of money.

keella : fort.

khadganisan : impression of sword which is used as authority.

khadi : a kind of hand-made clothes.

khair-adda : office established to export Acacia catechu wood.

khalasi : porter.

khangi : emoluments.

khaniwara : miner.

khara : cash payment.

kharbari : land which is allocated for growing thatching grass.

kharchari : tax levied on pasture land.
kharidar: clerk
khat: offence.
khet: land where paddy is cultivated.
khoria: slash-and-burn agriculture
khukuri: a dagger-like Nepali weapon having a curved blade.
khurpa: sickle.
khuski: system of timber extraction by private individuals against government permits.
kiranti: Mongoloids settled in the eastern part of Nepal.
kos: unit of distance, equivalent to two miles.
kot: courtyard.
kot#: highest point of a hill or track where security arrangements were established.
kote: headman of police station
kumarichok: accounts and audit department.
kurauni: dehydrated milk.
kut: rent.
lalmohar: red seal.
lam-adda: office created during the Rana period to cut timber for the palace.
lek: area of higher elevation
limbuwan: area of Limbu (a Mongoloid group of people) settlement.
liaso-paso-duwali: different kinds of trap for game hunting
lokabhar: duty of householder.
madesh: area of the Tarai and inner Tarai.
madesh-bandobast-adda: office for administration of the Tarai and inner Tarai.
Magar: an ethnic/caste group of the hills region
Magh: tenth month of the Vikram year, i.e. mid-January to mid-February.
mahane: people appointed to protect the forest, water-spouts, and roadside shelter.
maharaja: supreme king. It used to denote the king of the country. But after it was awarded as title to Prime Minister Jung Bahadur, it was used by all the Rana prime minister.
maharani: supreme queen.
main: wax.
mal: land-revenue office
mal-kachahari: see mal
mal-adda: see mal
mallaha: boatman
mana: unit of volume, mostly used for grain and liquids. 1.75 mana is equivalent to 1 litre. Traditionally land area was also denoted by the mana of seed needed for the area.
manachamal: a category of birta.
mandro: mat made of bamboo splits, mostly used for drying grain or vegetables in the sun, but sometimes used as planks.
mane: respectable person in a community.
Marga: eighth month of the Vikram year, i.e. mid-November to mid-December.
mauja: territory smaller than ilaka.
mijhar: headman of certain occupational castes and Mongoloid communities such as Tamauta, Lohar, Magar, Phalame, Kadera, Majhi, Nau, and Sunwar.
mohar: 1/2 of a rupee, but sometimes in the past its value was less than this.
moharu: see moru
mohoriyar: people who were responsible to maintain seal of authority.
mohur: see moru.
moru: currency in mohar, and sometimes it denotes the Nepalese currency.
mukhiya: village headman in the hill districts.
mukhtiyiar: this is from two words mukhya (main) and aktiyari (authority) which was later changed to Prime Minister
muluki: country-wide.
muluki-adda: home and general department.
muluki-ain: legal code.
muri: unit of volume, equivalent to 20 pathi
musal: part of a dhiki.
musal: assistant subba.
naike: foreman (In earlier days, these were chosen from each tol on the basis of his work during the previous year. After the naikes were chosen, crops were sown in turn under their supervision. It was the responsibility of the naike to insure that no person had his fields left uncultivated.)

nayanhitit-nagadi-tahabil-office: cash-management office located in Narayanhitit.

nausinda: clerk

naya-muluk: new territory, i.e. Banke, Bardiya, Kailai and Kanchanpur districts.

naya-muluk-ban-janch-goswara: central forest inspection for the naya-muluk region

naya-muluk-bandobast-adda: office responsible for the administration of the naya-muluk.

naya-muluk-goswara: district office for the naya-muluk.

naya-muluk-rakam-goswara: rakam-goswara for naya-muluk.

Newar: a caste, mostly involved in business.

nuwangi: a levy imposed at the time of harvesting new crop.

padhaune: a form of tax levied for social reasons.

pahad: hills region.

paisa: one hundredth of a rupee.

pakho: unirrigated land.

pancha: in earlier days, respectable member of a local community.

panchali: local institution during the Lichchhavi period.

panchamahapatak: five most serious crimes.

panchayat: village institution in early times. From 1960 to 1990 it was a political system under which the whole country was divided into about 4000 village panchayats and 29 town panchayats. Generally panchayat denotes a body or area of a group of villages. The panchayats have now replaced by village development boards.

panighat: water-hole for livestock.

patasi: a kind of hand-made clothes.

patawala: valid, not retired.

pathi: unit of volume. Eight mana is equivalent to one pathi and to 4.5 litres.

pati: roadside shelter.

Paush: ninth month of the Vikram year, i.e. mid-December to mid-January.
phikdar : a category of birta grants made in appreciation of services.
pipa : servant.
pradhanpanch : chairman of village panchayat during panchayat period.
pucca : standard.
raikar : state-owned land
raiti : common people of the country.
raiti-duniya : common people.
rajguthi : guthi administered by the central government.
rajya-tahasil-adalat : office in Kaski-Lamjung, which was the state of Jung Bahadur.
rakam : obligation of labour or goods.
rakam-goswara : central office for rakam management.
rakami : see rakamidar.
rakamidar : tax collector.
rekh : a kind of land tenure in Jumla.
rekhi : land-owner in Jumla.
ropani : unit of land area. 20 ropani is equivalent to about 1 ha.
rukka : order, authority; an official letter from the prime minister.
rukka-daskhat : signature of the prime minister in a order.
sadar : centre, central.
sadar-adalat : central court
sadar-dafdarkhana : central revenue department dealing with land and revenue.
sadar-jangi-kotawali-thana : central office of the jangi-pareth.
sadavarta : a category of birta.
salbasali : annual.
Sambat : see Vikram.
sanad : order of the government.
sanadiya : adjective of for sanad, i.e. anything under sanad.
sandisarpan : place allocated to villagers, convenient to trails, pasture and water-holes for cattle and their movement.
sanghu : bridge
sarbakar-akara-sarbang-mafi : all taxes waived
sardar: a top-ranking civil official, or sometimes an honorific title.

Sarki: occupational caste related to skin and hide, shoemaker.

sata: small-size timbers mostly used as beams in cattle-sheds.

saunefagu: a tax levied on roofs.

sawal: administrative circular of the government.

sera: land belonging to the crown.

serma: a type of land tax.

shilapatra: document carved in stone.

Shrawan: fourth month of the Vikram year, i.e. mid-July to mid-August.

Shree: an honorific prefix.

Shree 3: honorific prefix of the Rana prime minister.

Shree 5: honorific prefix of the royal family.

Shree Tin: see Shree 3.

sim: third quality from the top, generally used for land, trees etc.

sira: forest containing commercially valuable timber of the prescribed varieties.

sresta: account section.

subba: judicial position or chief district administrator; but replaced later by bada-hakim.

subedar: a subordinate rank in the army.

sudi: bright fortnight of the lunar calendar.

tahasil: administrative division, and was related in collecting the revenue.

talab: salary; also land allocated as salary.

talsing: landlord.

talukdar: local functionary and this is used widely.

taluki: responsibility or territory.

Tamang: an ethnic/caste group mostly settled in the central hills region.

tamrapatra: document carved in copper plate

tauwa: wooden structure made to stack rice straw.

Thakali: oldest person in a community, and also an ethnic/caste group.

tham: pillar.
thanti: roadside shelter.
thar: sub-caste.
thar-ghars: chiefs of some selected castes who held charge of
the principal offices of the state in the pre-Rana
and early Rana periods. They were members of the
families of those men who had helped Drabaya
Shah capture Gorkha and they always sat on the
councils of Gorkha. The six thars in question were
those of Ganesh Pande, Narayandas Aryal,
Bhagirath Pantha, Gangaram Rana, Sarbeshwar
Khanal, and Keshav Bohara. They were
colloquially called the thar-ghar and were
involved in the royal decision-making process.

thari: local functionary.
tharo: a branch of a green tree placed as a symbol of
protection at the boundary of a forest.

thek: contract.
thekdar: contractor.
thinguri-Mahal: government-owned or controlled depot
responsible for the cutting and export of
commercially valuable timber from trees with a
girth of less than 3 feet each, as well as of other
forest products.

thiti: established practice
thitibandej: royal charter
thum: sub-district
tipeta: system under which timber was cut by wage
labourers employed by the government.
tol: sub-village or subdivision of any settlement.
tola: unit of weight for precious goods, equivalent to
11.625 grammes.

udhaune: a form of tax levied for social reasons.
umra: contractor.
upa-pradhanpanch: vice-chairman of a village panchayat during the
panchayat period

Vikram: present era, which commenced about 56 years and
8 months before the birth of Christ. The year of
this era are usually denoted V.S (Vikram Sambat).
For example the year 2000 A.D. would be V.S. 2056
or 2057.

walak: a tax levied on homesteads in some hill districts.
GLOSSARY OF LOCAL NAMES OF PLANTS

ainselu
amp
angeri
areli
arkhaku
asna
babiyo in the hills
babiyo in the Tarai
bamset
ban
banj
banmara
bantarul
bar
basante
bet
bhakimlo
bhalayo
bhogate
bhorla
bijasal
bilaune
boddhairo
bokeful
boksi-kanda:
champ
chatu
chilaune
chutro
dalchini
dale-katus
dhairo
dhurseli
dudhilo
eklebir
gaitihare
gannejhar in Kamang
ghanagaru

Rubus ellipticus
Mangifera indica
Lyonia ovalifolia
Mimosa himalayana
Lithocarpus elegans
Terminalia tomentosa
Ischaemum angustifolium
Tamarix indica
Quercus lamellosa
Quercus incana
Quercus lanuginosa
Eupatorium adenophorum
Dioscorea spp.
Ficus bengalensis
Mallotus philippinensis
Calamus tenius
Rhus semialata
Rhus wallichii
Maesa macrophylla
Bauhinia vahlii
Pterocarpus marsupium
Maesa chisia
Lagerstroemia parviflora
Cotoneaster spp.
Mimosa rubicaulis
Michelia champaca
Plumbago zeylanica
Schima wallichii
Berberis aristata
Cinnamomum tamala
Castanopsis indica
Woodfordia fruticosa
Clerodendron infortunatum
Ficus nemoralis
Lobelia pyramidalis
Inula cappa
see banmara
Pyracantha crenulata
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Appendix I: Istihar 1906

(Seal of Prime Minister on the top, and of Commander-in-chief on upper left half of the text)

So far raitis of gol and daruwa have been paying gol and daruwa rakam through talukdars, and this is causing (i) tension in submitting 360 dharni per doko in kind, (ii) discrimination in paying as some raiti pay in kind and some pay in cash, and (iii) problems with forest guards while those who have to pay in kind are cutting and collecting in the forest. To facilitate the raiti-duniya by uniformity in the system, the balance due as at the end of the Vikram year 1961 has been waived. From now onward (from Vikram 1962) the following arrangements have been made.

i. Villages which have allocations to supply sawn timber, planks, handles for implements and nigalo will continue as before.

ii. Villages of group 88 which have allocations to supply gol and daruwa at Nagarjun will supply all in kind.

iii. Those who have allocations to supply 360 dharni of daruwa will now supply one quarter (90 dharni) in kind and the balance (270 dharni) as moharu 2.70 in cash @ 1 paisa per dharni.

iv. Those who have allocations to supply 360 dharni of gol will now supply one sixth (60 dharni) in kind and the balance as moharu 3.00 in cash @ 1 paisa per dharni.

v. Those who have allocations to supply 360 dharni of gol or daruwa but are under 16 or over 60 years of age or are physically disabled will pay moharu 3.60 @ 1 paisa per dharni.

For the year 1962-63, if the obligations are supplied as before, any shortcomings, in kind as mentioned above, will be collected in kind and the rest will be collected in cash. After that the amanat-tahasil-adda, which used to collect amanat-tahasil, will be abolished. Instead a contract has been granted to ditha Kosh Nidhi Tiwari for three years from 1st of Paush 1963 to last day of Marga 1966.

A sanad is also granted in the name of ban-goswara instructing as follows:

i. to allow people with obligations of gol and daruwa, to prepare gol and cut and collect daruwa from the forest located beyond four thousand hat of the other side of the hill out of Charbhanjyang.

ii. check-post not to stop and harass such people.

---

1 The original copy of this document is with Mr Hem Bahadur Lama of Madanpur, who is a former local functionary encountered by me during field work.
2 Name of a place in the north-west of Kathmandu valley
3 Four passes to enter Kathmandu valley
So talukdars will ensure the raiti clear the scheduled payments in kind and cash by the end of Chaitra of the same year even by reminding (if necessary) the raiti. If the raiti do not settle within the specified period, the talukdar will allocate their land to other people who agree to the bali-kut and also to pay the contractor the balance due in kind and cash. Accordingly if the talukdar does not clear the balance within two months after the end of the year, he will not be able to excuse himself by blaming raiti. The contractor will collect through appointing another talukdar in bali-kut.

Date:-1963 Paush (December, 1906)
Appendix IA: The istihar document
Appendix II: Banpala-daskhat 1904

Letter from- Chautaria, Keshari Jung Parakram Shah (seal stamp )

To:- Mijhar: Indra Jit Lama, and tharis: Chin Lama, Jagatye Lama, Maitye Lama and Sane Lama.

I hereby authorise you to protect the following forests which lie in your ilaka among the forests of our birta and manachamal in Belkot which have been protected since a long time back.

So in the forests annexed below

i. do not cut trees yourself and do not allow others to cut.

ii. do not allow khaniwara to cut.

iii. do not allow lighting of forest fires.

iv. do not allow anybody, except our people, to hunt.

v. if someone disobeys this ruling and fells trees in the closed (protected) forest, arrest him and punish him under the Acts as at the rate of moharu 4 for abal, moharu 3 for doyam, moharu 2 for sim and moharu 1 for chahar per tree.

vi. if someone cuts trees in the closed forest and goes into hiding, take steps to find him and punish him according to the Act.

vii. if he cannot be found, report to us the name of the forest and number and quality of trees of each species which have been cut.

viii. use grass, and fallen, rotten, lying and dried trees only with the permission of chitaidar.

ix. do not allow anybody to damage sal and sallo trees when collecting fodder.

x. even in forests that are outside the boundaries but are allocated for the convenience of duniya-raiti, do not allow to cut tree by damaging prospective tree of sal and sallo.

xi. do not allow forest to be cleared for cultivation.

xii. allow to cut in the forest allocated as convenient for local people ensuring the forest will not be damaged.

xii. offenders in closed forests should be tried before the patawala dware and punished as mentioned above.

1 The original document is with Mr Bir Bahadur Lama, a son of Indra Jit Lama, the former mijhar whom I encountered during field work.
xiii. out of the amounts accrued from fines

a. the thari and mijhar who arrest the offender will get two sixths of the amount.

b. the dware who made jamanbandi and kabuliatnama will get one sixth.

c. the dware will deposit three sixths of the amount in our account and get a receipt.

xiv. submit to us those who fire forest or do hunting against this ruling.

xv. the chitaidar should report the amount accrued by penalising the people who cut trees in the forest in every three months.

From now onward the forests will be checked every sixth months. If during the check, traces of -

i. cutting and felling of trees in the closed forest,

ii. forest burning, or

iii. hunting of birds and wildlife except by our people -

are found, you will have to pay from your own properties the penalties prescribed above. You will also have to pay according to the Act for forest fires, slash-and-burn, and hunting. So accordingly we have granted the signature in banpala-daskhat.

Annex

Boundaries of Betini forest

East- Baluwa-bhanjyang and ridge of the hill
South- Arukharka-bhanjyang
West- Bhasmeko-kholso
North- Mahadevsthan-dovan

Boundaries of Tapu forest

East- Tigaun-thadobato
South- bari of Mulgadi, corner of bari of Bramha Dutta and Lamakhore
West- Upallo-jamune-khetko-kulo
North- Sathika-pataka-danda.

Date: 5th of Marga 1961 (seal stamps of two persons)
Appendix IIA: The banpala-daskhat document
मुख्य दान करके बाल विद्यालय ने जने का एक सेवाकार तथा नागरिक का 
एक एक मास के लिए नागरिक के लिए जने का एक सेवाकार तथा नागरिक का 
एक मास के लिए नागरिक का जने का एक सेवाकार तथा नागरिक का 
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एक मास के लिए नागरिक का जने का एक सेवाकार तथा नागरिक का 
एक मास के लिए नागरिक का जने का एक सेवाकार तथा नागरिक का
Appendix III: Letter from DFO, 1961

Office Heading- HMG, Shree Trishuli Division Office

Letter despatched from Betini by DFO, West No 1, Nuwakot

Date- 2017.11.20. (March 1961)

Letter to:

i. Dambar Prasad Sharma, resident of Upallotigaun
ii. Krishna Mani Sharma, resident of Upallotigaun
iii. Mukhiya Sabha Singh Tamang, resident of Upallotigaun
iv. Mukti Nath Gajurel, resident of Upallotigaun
v. Jagat Bahadur Tamang, resident of Upallotigaun
vi. Ratna Bahadur Tamang, resident of Pakhure.

The content of the letter:

1. Co-operate with the division (i.e. divisional forest) office to sustain your own house and sheds by prohibiting the following destructive activities in Betini, Kafal-danda, and other adjoining forests:
   - slash and burn
   - lighting of forest fires
   - cutting green trees
   - cutting newly regenerated seedlings and saplings
   - uncontrolled grazing

2. Forest is the soul of hilly country.

3. Destruction of forest is to put an axe to your own knee.

4. In addition, the disappearance of forest from the slopes will be accompanied by land-slides, drying of water sources and degradation of whole villages.

5. So keep the forest secure considering all these aspects.

Bhavadiya (Yours Sincerely)

Gobinda Ram Bhakta Mathema
Divisional Forest Officer

---

1 The original copy of this letter is with Mr Mukti Nath Gajurel, a resident of Dandatol, Upallotigaun, Belkot Village Development Board. I copied it during my field work in January 1990.
Appendix IV: Application submitted by the local people

Date- Jesth 18, 2039 (June, 1982)
Application to the DFO
Subject - Forest protection

Text of the application

1. According to the decision of the village assembly of Madanpur village panchayat held in the year 2031, the protection of Betini forest was initiated in Jestha 2032, jointly by 200 households of Arukharka, 140 households of Upallotigaun and 100 households of Pakhure. The forest lies west of Dharne-khola, east of Tigaun-khola, north of Kafal-danda main trail and south of Mahadevsthan-dovan. Three people, Kaman Singh Tamang, Krishna Bahadur Tamang and Katak Bahadur Tamang were appointed as watchers. Every household agreed to pay the watcher Rs 5 and five pathi of maize monthly.

2. This activity has been going on since then.

3. Recently we have heard that the people of Tallotigaun wished to have this forest nationalised.

4. It is our humble submission that our investment will be lost if this forest is nationalised.

5. If it is nationalised, it will be inconvenient for all 440 households to collect fuelwood, fodder, grass and leaves from the dead, rotten and fallen trees.

6. So we request you to secure the status of forest as it is now (villagers' forest), and instruct Madanpur village panchayat accordingly.

Signatories

Kaman Singh, watcher from Pakhure
Krishna Bahadur Tamang, watcher from Arukharka
Katak Bahadur Tamang, watcher from Upallotigaun
All residents from these villages (list and signatories follows)

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1 The original copy of this document is with Mr Kaman Singh Tamang, a forest watcher working since 1960. I copied it during my field work.
2 Though this is clearly written as monthly, it must have been yearly. The present rate of this contribution is 5 pathi annually.
Appendix V: *Gadpatra, Bhusapheda 1938*¹

We, as signed below, the residents of all the hamlets located in lek and besi of Pheda village of Kabhrepalanchok district in East No.1, have assembled here because Bhumisthan and Devisthan forests are degrading now. These forests, including barren land, are convenient and common to all the residents of Pheda village. They were allocated in the past according to the convenience of location respectively for 19 doke, 18 doke and 10 doke. So from now onwards, by our own consent, the areas of Devasthan, Bhumisthan Devisthan and the following four areas:

i. the forest area under the allotment of 19 doke, i.e. the forest east of Khodekpa-thado-bato, north of Rekte-puchhar-nuthaba-dovan, west of Khare-khola and south of Patan and Nuthaba-dil,

ii. the forest east of Chyang-khola, west of Ghyalthaiba-khola, north of Devisthan-pakha, and south of Purangaun.

iii. the forest east of Maaljang-dovan, north of Chitre-dil, west of Sano-majuwa and south of Walaque-pakha.

iv. the forest west of Mahavir-dil, east of Gursa-harisiddisthan, north of Agle-todkepani-mulbato and south of Gursa-pakha-vir;

will be protected by prohibiting all the activities of felling and slash and burn. Any person found disobeying these conditions and getting involved in felling trees or cutting fodder, bamboos or *malingo* will be liable for penalties under the enactments on the basis of species he has damaged. We have concluded this *gadpatra* on our own initiative and are comfortable with it.

Signatories

1 main *pancha*, 8 *panchas* and residents of Multol, Naiketol, Purangaun, Pata and Khanigaun

Date:-1995 *Jesth* 1 Monday (May 1938).

¹ This document is with Mr. Shuk Man Tamang, a son of former mijhar Najar Man Tamang and was photocopied during my field work.
Appendix VA: The gadpatra document

The list of the signatories follows in the original document.
Appendix VI: Akarnapatra of Bhusapheda 1949

We, as signed below, the residents of Bekh-pheda village in the Kabhrepalanchok ilaka of East No.1, are here because the bekhwala of Bekh-pheda village (who is also eastern commanding general) ordered us in the year 2003 (1946 A.D.) to protect and maintain the government's forests. Accordingly the forest east of Bhaunsatpa main trail, west of Barapaile, north of Rekte-khola, and south of Patan-kharka-dil should have been maintained well stocked, whereas it appears to have been felled and cleared in places. So we, as signed below, will no longer be felling and clearing and are ready to suffer any penalties prescribed under the Acts if we are found to be involved in such activities. We have produced this akarnapatra on our own initiative. We submit it to His Majesty through our talukdar.

Signatories

Residents of Multol, Naiketol, Purangaun, Pata and Khanigaun

Date ::2006 Baishakh 26 Monday (May 1949)

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1 This document is with Mr. Shuk Man Tamang, a son of former mijhar Najar Man Tamang and was photocopied during my field work.
The list of the signatories follows in the original document.
Appendix VII: *Binayapatra* of Bhusapheda 1954

This is to report the injustices committed by certain residents of Bhekh-pheda village in the Kabhrepalanchok *ilaka* of East No.1. In the past the forests of our village which are on the religious sites of Bhumisthan and Devisthan, water sources and allocated pasture land were protected in accordance with a written document prepared with the consent of all the villagers. But now people are collecting firewood by cutting and clearing on land allocated to others. The number of people who are collecting firewood to stock up for the rainy season cannot be estimated. By such activities prospective big trees are being damaged and even the saplings of *khasru*, *banj*, *arkhulo*, *katus* and *phalant* are being destroyed. Because the people involved cannot be detected, the forests are being degraded day by day. It is difficult even for wild animals to found shelter, since jackals and cats can be seen walking even from a distance of one *kos* away. So for myself and as the representative of other *talukdars*, Padma Ghychho Lama, Hari Dev Lama, and *jimmuwal* Bal Bir, I am reporting these facts along with the copies of *gadpatra* of *Jestha* 1995 (May, 1938 A.D.) and Monday 26 *Baishakh* 2006 (May, 1949). With regard to the people who have infringed the conditions of *gadpatra*, as could be proved in the field by observing the damage they caused to the big trees while cutting firewood, it could be more clear if their stocks of firewood were checked in the forest before being taken to their house. Thus if the government authority would make a document to which all residents of village would agree and if the prohibitions prescribed by the *gadpatra* were enforced by the *ban-goswara*, there would be enough products from the forest for the residents, easy shelter for wild animals, and eventually the forest would be improved.

Lord, whatsoever you order.

Always at your service.

*Mijhar* Najar Man Tamang (Resident of Bhekh-pheda village in Kabhrepalanchok *ilaka* of East No. 1)

Date- *Baishakh* 1, 2011 (April 1954).

---

1 This document is with Mr. Shuk Man Tamang, a son of former *mijhar* Najar Man Tamang and was photocopied during my field work.
Appendix VIII: Minutes of forest committee, Bhusapheda

1988

1. Every watcher employed for plantation will watch Kamang forest one day each week.

2. Any member of the forest committee or any watcher who encounters people cutting green trees for fuelwood and fodder will confiscate the cutting implements and submit them to the forest committee.

3. Immediate action will be taken against those people who fell trees for fuelwood or timber without the approval of the forest committee.

4. Ganesh Bahadur Adhikari of Ward 5 has been warned about felling a tree without approval.

5. Ghising Lama of Ward 2 has also been alerted on the same ground as above.

1989

1. Plantings in the fiscal year 1988-89 will be carried out in the area west of Thami-chautara, east of Barapaile, south of Hotel-danda and north of Makaimrang-danda. If there are enough seedlings left after these plantings, 2000 seedlings will be planted in Bhumesthan-danda of Ward 2.

2. Cutting of green trees in the Kamang, Kawajung and Bhumesthan-danda is prohibited. If anyone is found doing so, he will be reported to the committee for necessary action.

Second Meeting

3. It is decided to plant 7 and 5 seedlings in the religious forest of Bhumesthan Danda on the happy occasions of giving birth to a son and getting married respectively. Anyone not doing so will be liable for a fine of Rs 5 to Rs 50.

4. From this year onwards everybody will be asked to plant 25 to 50 seedlings on their land. Anybody not doing so will be fined Rs 50 to Rs 150.

5. It is permitted to cut grass from the plantation area between Thami-chautara and Patan, but only the people of this panchayat can cut the grass.

6. People from another panchayat can cut grass on the payment of Rs 15

---

1 I had a chance to see the minute book of the committee during field work at Bhusapheda. The book was with Tej Bahadur, the chairman of the committee, but was made available to me by Bali Man Tamang, the naike of Ghumaunepani panchayat nursery.
to Rs 25.

7. Those who cut green timber, firewood and fodder from the forest of this panchayat will be brought before the District Forest Office for legal action after confiscation the implements by the member of forest committee and forest watcher.

8. Nursery naike will continue to check the areas of watchers.

9. Ghumaunepani nursery will be moved to Bhumesthan-danda, as the area around its location has been planted.

10. As Garja Man of Ward 4 Purangaun has been damaging the forest frequently, he will be reported to the District Forest Office for legal action.

11. If the nursery naike, assistant-naike and watcher are found damaging forest they will be instantly dismissed from their positions.

12. As Krishna Bahadur confessed the damage he made to the plantation of Titemarang, he has been warned.

13. If watchers are found absent for seven days, they will be dismissed.
Appendix IX: Banpala-sanad of Melung 1908


Letter of:- Commander-in-Chief, General Bhim Shumshere Jung Bahadur Rana.

Order to :- Salbasali talukdar, mukhiya, mijhar, and respectable raiti-duniya of Melung village in East No. 2.

The rukka-dashkhat sanctioned on Monday, 3 Ashad 1964 (June 1907) states: "The forests under your taluki have been removed from the control of the jangi-pareth and placed under your (talukdar's and raiti's) responsibility. Protect and improve such forests as fall under your respective responsibilities. If any one needs (forest products) for any purpose, you allow only a reasonable quantity to be taken from dead, dried and fallen trees of the forest with the consent of both (talukdar and raiti). For building a house if the talukdar needs it, get it sanctioned by the raiti; and if the raiti needs it get consent from the talukdar. If somebody is found clearing and felling indiscriminately in the forests mentioned, arrest that man and take him to the district court for necessary legal action. So report to the ban-goswara office the boundaries and names of the forests of your respective taluki for listing those forests under the banpala-sanad. Then you will get the forests listed under such sanad through that office maintaining an appropriate register. If trees in a forest are found to be felled indiscriminately, during the visit of a daudaha deputed from the centre to check the forest, action will be taken according to the enactments."

Whereas the arrangements made by annex 2 of clause 9 of the sawal sanctioned on Tuesday, 27 Falgun of the year 1963 (March 1907) were to the following effect: "Issue orders in the name of East and West jangi-pareth instructing them to forward a recommendation to the ban-goswara within three days (attaching all details of requirements from applicant) if a raiti-duniya applied to them the timber to a build house or cattle-shed. When such a recommendation are received by the ban-goswara, or an application is submitted directly to the ban-goswara, issue permit by completing the formalities as in clause 7 of above (of same sawal sanctioned on March,1907).

Whereas the duichhape sanad sanctioned on Monday, 26 Ashad 1964 (July 1907) in the name of this office (ban-goswara) ordered sanad to be issued to the respective talukdar and raiti and also the jangi-pareth of East No. 1, 2, 3 and 4 to work as per clause 7 (of that sanad sanctioned in June 1907) made in the name of talukdars and raiti of the villages in East No. 1, 2, 3 and 4.

---

1 This document is with Ram Narayan Shrestha of Melung, who has submitted a copy to district forest office, Dolakha.
When a request (mentioning difficulties due to the state of confusion caused by not referring the sawal issued to ban-goswara and subsequent sanad issued by ban-goswara on this basis to all ilakas and offices in the east and west) was submitted, an approval was given, through a hukum-marjy on Friday, 32 Shravan 1964 (August 1907), to issue sanad in the name of talukdar, raiti and jangi-pareth to follow the formalities set out in the sanad of 26 Ashad 1964 (July 1907) when supplying timber for building houses, cattle-sheds and inns, and to ignore the formalities of the sawal (of March 1907) made to that office (ban-goswara) and the subsequent sanad issued to jangi-pareth on that basis.

The ban-goswara noted: "There was no order to talukdars and raitis of the eastern region to submit reports to the centre to get their forest listed under banpala-sanad; and there were no penalties specified for those who failed to do this. The forests that were being watched by the jangi-pareth could be damaged indiscriminately because the sanad (stating such forests are under the responsibility of talukdars by transferring from the responsibility of jangi-pareth of East No 1, 2, 3 and 4) has been issued to all offices." Then it was proposed (by the ban-goswara), for prompt action, that:

i. all jangi-pareth, mal and adalat of East No. 1, 2, 3 and 4 should be instructed to notify all talukdar of their respective territories regarding the submission of the names and boundaries of the forests within their taluki so they can be listed under the banpala-sanad.

ii. failure should be punishable.

iii. all these offices should get the reports from the attending talukdar raiti on the forms sent from this office (ban-goswara) and forward them to the ban-goswara.

iv. after the ban-goswara had completed the banpala-sanad and sent it to the respective offices and had entered the forests in the appropriate register, the banpala-sanad should be delivered to the respective talukdar and receipt sent-back to ban-goswara.

v. the ban-goswara should be authorised punish those who fail to perform accordingly

Muluki-adda approved with the comment that: "After notifying, prepare the document stating fact if there is no forest. If there is no response (from respective talukdar) in such notice or respective offices did not send after completing formalities, report for punishment."

The approval given by the muluki-adda was endorsed later through a hukum-marjy on Saturday, 21 Baishakh 1965 (May 1908).

Accordingly when it (the endorsed policy) was circulated to the jangi-pareth, mal, and adalat of East No. 1, 2, 3 and 4, the residents of the following ilaka, thum and gaun submitted applications to maintain the forests in their taluki within the boundaries as mentioned below, excluding traditionally cultivated and taxable land, houses and sheds, which used to be
watched regularly and checked every six months by East No. 2 jangi-pareth. The recommendation of East No. 2 jangi-pareth was attached to the application.

The ban-goswara finally decided to sanction the banpala-sanad in the name of salbasali talukdar, mukhiya, mijhar, gaurung, respectable raiti-duniya of thum villages listed below. So Brigadier Colonel Dal Bahadur Basnet Chhetri (officer-in-charge of the ban-goswara) and Bhudik Raj submitted the proposal for approval as:

"The forests within the boundaries as mentioned below excluding taxable and traditionally cultivated land, hamlets, houses and sheds are sanctioned under sanad in your (salbasali talukdar, mukhiya, mijhar, gaurung, respectable raiti-duniya) name. Do not allow anybody to cut green trees, light fires, slash and burn, create poaching through liso-paso-duwali or perform any other indiscriminate actions. Use dry trees for fuelwood. If wood from green trees is needed to build houses, cattle-sheds, inns, bridges or river crossings, consult the raiti if the talukdar needs it and consult the talukdar if the raiti needs it. Use wood from branches or old, dry, fallen or damaged trees whenever possible. Otherwise cut it as necessary so as to maintain equal spacing between trees and without hurting the forest. Follow instructions in the sanad and permit if needed for government work. Arrest anyone who infringes these written conditions and escort him to the district jangi-pareth, mal or adalat office, whichever is nearest to you, to have him punished. If the forests are found indiscriminately felled and cleared, or the written instructions not followed, during the visit of daudaha (deputed from the centre for checking forest), action will be taken to penalise in accordance with the Act. Initiate actions to improve forest by understanding this."

We (Prime Minister and Commander-in-chief) acknowledge it approved. Therefore protect the forest and involve yourselves in improving the forest.

Annex

<table>
<thead>
<tr>
<th>Ilaka, thum, and mauja of the approved banpala-sanad.</th>
<th>Names of the forests and boundaries.</th>
</tr>
</thead>
<tbody>
<tr>
<td>As there are no talukdars in Melung village thum</td>
<td>Chyne-khola, Kafle-khola, Bajeni-khola-ban,</td>
</tr>
<tr>
<td>Simras of Dolakha in East No 2 jimmuwals- Mani</td>
<td>Simko-utiseghari, Bimire-utiseghari, Sanu-katike,</td>
</tr>
<tr>
<td>Raj Newar, Chhatra Singh Lama, Mangale Lama;</td>
<td>Kalleri-salghari, Kuldhung, Chotedanda-salghari,</td>
</tr>
<tr>
<td>dware- Garja Man Lama, and Bag Bir Lama, Sharma</td>
<td>Jaruwa-salghari, Salle-pakho, Guransepani-salghari,</td>
</tr>
<tr>
<td>Lal Lama etc.</td>
<td>and Devištān forests in the west of Jogidanda,</td>
</tr>
<tr>
<td></td>
<td>Thaledanda, Ganeshe-dhungo and Kamere-gairo, east</td>
</tr>
<tr>
<td></td>
<td>of Mehele Bhanjyang-Pokhari, Kahule-khola,</td>
</tr>
<tr>
<td></td>
<td>Devištān and Simkhet Pahiro, north of Milti-khola,</td>
</tr>
<tr>
<td></td>
<td>Jantare-khola, Nigasiko-Jagadiya-khoria and Walo-</td>
</tr>
<tr>
<td></td>
<td>khola, and south of Phadke-khola</td>
</tr>
</tbody>
</table>

Date:-Tuesday, 11 Bhadra 1965 (August 1908)
Appendix IXA: The banpala-sanad document

[Because of the condition of the original Appendix IX document, I have presented here the banpala-sanad for Gahate-pakha forest of Melung. All the documents issued for various forests of Melung are exactly the same except for the information relating to the specific forests i.e. boundaries, names of forest and respective functionary, and date of issue. I am including this document to show the original script and contents as clearly as possible.]
वर्तमान समय में अनुवाद का संबंधित कार्य के प्रदेश में पृथ्वी पवन का आधार के प्रमाण है। राजस्थानी पवन के प्रमाण देखने के लिए इंतज़ार कर फिर आकर पवन के प्रमाण के साथ राजस्थानी पवन का आधार करें।

राजस्थानी पवन का आधार के प्रमाण है। राजस्थानी पवन के प्रमाण देखने के लिए इंतज़ार कर फिर आकर पवन के प्रमाण के साथ राजस्थानी पवन का आधार करें।
Appendix X: Bintipatra Melung 1943

To :- Maharaja, the source of kindness and the sea of pity

The excessive injustices committed by (i) Gokul Nath Padhya, the talukdar of Melung village who resides at Gairagaon on birta in another district, (ii) Dhan Das Shrestha of Melung village, (iii) Kul Nanda Padhya of Kuldhung and (iv) Padme Newar (who is also called Gore) of Bojheni are stated here. In the year 1965 (1908 A.D.) the forests namely Chyan-khola, Kafle Bojheni-khola, Simko-utiseghari, Bimire-utiseghari, Sanu-katike Kalleri-salghari, Kuldhungko-chhote-danda-salghari, Jaruwa-salghari, Tallopakha Gurunan-pani-salghari, Devisthan etc situated in the west of Jogidanda, Thledanda Ganeshdhunga and Kamere-gaunda, east of Mehele-bhanjyang-pokhari, Kaule-khola, Devisthan and Simlekhet-pahiro, north of Mitti-khola, Jantare-khola, Nikasiko-sandko-jhagadiya-khoriya, and Devibasne-kholsa, and south of Phadke-khola were protected under banpala-sanad issued from ban-goswara in the name of former talukdar-mijhar Garja Man of kipat Melung village and my father Chhatra Singh Tamang. When mukhiya Gokul Nath became the talukdar of Melung village, he felt himself as the dispossessor of forest as well and contravened the conditions of the sanad. He allocated(registered) Bojheni forest to Padme Newar, Bansghari forest to Dhan Das Shrestha, Kuldhung forest to Kula Nanda Padhya, Mathillo-kafle forest to Chature Thapa Chhetri, Chhotedanda forest to Man Hamal Thakuri, and Gurunan-pani-salghari forest to himself. All these areas are within the boundaries of the forest under banpala-sanad. We, being chitaidars, are liable to be punished if we do not report this. So on Wednesday, 14 Paush 2000, we submitted a bintipatra through the post office. Thereupon, sanction was given to check the forest and have the offenders punished, if the report is found correct. The document ordering this is in the East No. 2 adalat. So far the forests had not been checked. Eventually the forests were found to be indiscriminately damaged even further, by felling trees of ten species. As charges could be laid against us, the chitaidars, if we do not report again, we therefore submit this bintipatra to your foot through the post office requesting an order to be issued to East No. 2 goswara and Melung jangi-pareth to investigate jointly the reports and arrange for appropriate punishment as per the Act and sawal by arresting to those who have benefited and damaged forest indiscriminately so that the forest will be improved. We wish all the best to Maharaja. Command as you feel.

Always at your service.

Lai Nam Tamang, resident of Melung (for all household raitis of Melung village in Simras ilaka of east No.2 adalat).

Date:-Marga, 2001 (November 1944).

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1 The copy of this document was found with a son of Lai Nam Tamang in Melung. From the note in the document it shows that the bintipatra was sent through the post office on Friday 2nd of Marga in the year 2001 (November 1944) and later it has been received by Prachanda Das on behalf of Shree 3 Maharaja.
Appendix XI: Decision paper 1951

From the decision paper of Dolakha *mal* dated January 1951, the following facts could be ascertained:

1. Krishna Bahadur Nagarkoti, resident of Sanumilti in Simras *mauja*, had submitted two separate applications, on or before the February 1950, to get registered:
   i. the Ahal-chaur land east of Terso-bato, west of Thado-goreto, north of Chandra Lal's *khet* and south of Terso-bato; and
   ii. the Kalo-khola land in the east of Kholsa, west of Thada-danda, north of Siran-bari-khoriya and south of Kalo-pahara.

2. These lands were surveyed and inspected by people sent from the office (most probably from the *mal* office) in the third week of February 1950.

3. Padam Prasad of Sisneri, Laxmi Kanta and Padam Lal of Jaisigaun and Dhan Bahadur Khatri of Katike had reported, claiming that the lands surveyed in processing the application of Krishna Bahadur lay within the *sandisarpan* of Nigasi, Melung, Katike, Simras and Sisneri, and that these lands bore trees of chilaune, sallo, sal and utis.

So the plaintiffs had demanded:
   i. suspension of the report made on the site when it was surveyed and inspected.
   ii. penalising the applicant and those people who gave witness on the site, according to the Act and rules, and
   iii. regulating the lands as *sandisarpan* and forests.

4. The defendant, Krishna Bahadur, submitted in defence that:
   i. the lands are surrounded by cultivated land.
   ii. there are trees of *sal*, sallo, and chilaune.
   iii. they are not in the *sandisarpan* of the villages of the plaintiffs but are at a distance of two *kos* away.

5. Nothing was referred by plaintiffs and defendant regarding the witness and documents.

6. The office had deputed staffs to make a report on the sites in the last week of May 1950. But the plaintiffs Padam Prasad and Laxmi Kanta did not attend to defend their claims.

7. Nothing was mentioned about the distances of the lands from various villages.

8. The plaintiffs had not claimed it as traditional *gauchar* or *sandisarpan*.
9. If it had been the *sandisarpan* of 5 or 6 villages, they could have reported and given witness. But they didn't do so.

10. There are differences in names between those in the application and those in the report.

11. Ten people, including *jimmuwal-mukiya* Gokul Nath and Babu Lal Tamang had applied to have the registrations of Sanad-pakha and Guranse-pakha which were made in Vikram year 1942 as *serma* revalidated henceforth to *bijan* in the name of Gokul Nath and Babu Lal.

12. Krishna Bahadur had admitted that it was registered not knowing it had been registered before in the name of Babu Lal and Gokul Nath. Now he (Krishna Bahadur) had acquired the lands by means of a document transferring their ownership to himself. He had applied for registration on *khet* although the area had been forest.

13. Four people including Arga Lai Padhya, had stated that the land had been maintained as their *gauchar* by sharing *kharchari* of Rs 2.50 from the time of their ancestors.

14. Seven people, including Lalit Bahadur submitted that the ownership of the lands was not known but that there were trees of *sal*, *sallo*, *chilaune*, *gurans* etc. which are useful for public works.

15. On the basis of evidence of the lands being used as *sandisarpan*, *panighat* or *gauchar* and having trees including of *sal* and *sallo* they should not have been registered. The registration should have been invalidated by reporting it in time. It was not done.

16. In the sketch map of the controversial lands, nothing is mentioned regarding the trees situated on the lands.

17. From the evidence given by *jimmuwal* Gokul Nath during the registration for reclamation, the claims of the plaintiff seem weak.

18. Considering the circumstances that:
   i. Krishna Bahadur, who had applied to register the lands, had confirmed the presence of trees of *sal* and *sallo*,
   ii. on the site sketch map, the land was stated to be barren and to contain trees of *sal* and *sallo*,
   iii. in addition, seven people, including Lalit Bahadur, had stated the presence of valuable trees which could be used for important public works,
   iv. in maps Nos. 21 and 26, trees are sketched but the species are not specified.

19. It should not be permitted to cut or fell trees of *sal* and *sallo* in the *pahad*, which is banned.
20. According to sections 36 and 38 of the order issued to this office, the lands which are claimed as sandisarpan and gauchar cannot be permitted to be reclaimed.

21. On the other hand, if this land had been registered under kharchari, jimmuwal Gopi Nath should not have given his witness or encouraged the surveying and checking for the new reclamation.

22. If the land had been already registered previously, evidence regarding the ownership should have submitted within specified period, fifteen days, which had not been done.

23. This office cannot decide in favour of ownership only on the basis of the contents of sketches and witness documents prepared on the site.

24. So on the basis of the following evidences:
- it is against the Act and rules to allow cultivation of land having trees of four annexed (specified in the prohibited list) species,
- the lands are the sandisarpan allocated for grazing livestock of the villagers,
- by the claim of people, including Lalit Bahadur, the lands are forest having large trees which could be used for public works,

it is decided here that the land registered by Krishna Bahadur is sandisarpan and gauchar. On the basis of this decision the following have to be implemented:

A. As the following people were found to have been involved in registering the land under sandisarpan, gauchar and forests, through submitting applications and witnessing, they will share the punishment of five rupees according to Clause 13 of the Land Reclamation Act.

i. Defendant, Krishna Bahadur Nagarkoti of Sanumilti 0.50.
ii. Jimmuwal Gopi Nath Padhya of Melung 0.50.
iii. Harka Bahadur Nagarkoti of Sanumilti 0.50.
iv. Hawaldar Dhan Bahadur Nagarkoti of Sanumilti 0.50.
v. Hawaldar Nar Bahadur Nagarkoti of Sanumilti 0.50.
vi. Indre Tamang of Sanumilti 0.50.
vii. Bom Bahadur Tamang of Sanumilti 0.50.
viii. Lal Bahadur Budhathoki of Rautali 0.50.
ix. Dil Bahadur Nagarkoti of Sanumilti 0.50.
x. Tej Bahadur Nagarkoti of Sanumilti 0.50.

B. Nothing need be done about the plaintiffs, as there is no reward mentioned in the Act regarding such cases.
C. The following staff who were deputed to investigate the matter were found to have deviated from the Act by registering the lands containing trees of sal and sallo. So they have to be fined, according to clause 208 of legal procedure, Rs 0.16 each.

i. Hari Bahadur Shrestha, nausinda of Dolakha mal and resident of East No. 4, Dawakot. Rs 0.16

ii. Dal Bahadur Shrestha kote of gulm no. 5 of East no.2 and resident of East No.2 Rs 0.16

iii. Bhim Bahadur Thapa Chhetri, constable and resident of Sukajor Rs 0.16

D. Inform branch No.5 of the record section to erase the record after termination of the specified period for appeal.

E. Inform the losers about the specified period for appealing and provide copy, if requested, according to the Clause 248 of Legal Procedure.

Date:— 2007 Paush 18, Tuesday (January 1951)
Appendix XII: Evolution of *banpala-sanad*

I. *Banpala-sanad* documents

The following *banpala-sanads* are taken as a basis for sketching the evolution of *banpala-sanad*.

a. *Banpala-sanad* for certain forests (including Sallepakha) of Melung, Dolakha district, issued on Tuesday, 11 *Bhadra* 1965 (August 1908) (see Appendix IX).

b. *Banpala-sanad* for Thadipairi forest of Melung, issued on Monday, 27 *Aswin* 1965 (October 1908)\(^1\).

c. *Banpala-sanad* for Gahate-pakha forest of Melung, issued on Sunday, 13 *Baishakh* 1966 (April 1909)\(^2\).

d. *Banpala-sanad* for Archale-patle forest of Kavre village, Dolakha, issued on Tuesday, *Falgun* 19 1965 (March 1909)\(^3\).

e. *Banpala-sanad* for certain forests in Jiri area, Dolakha, issued on Monday, 27 *Aswin* 1965 (October, 1908) (see Appendix O in Acharya, 1990).

f. *Banpala-sanad* for Majuwa-kuwapani forest of Kaski, Gandaki zone, issued, on Wednesday, *Paush* 9 1971 (December 1914)\(^4\).


h. *Banpala-sanad* for Dhadeshim, Kopche, Kukhurechaur etc. forests of Kavreparegaun, Dolakha district, issued on Tuesday, *Falgun* 19 1965 (March 1909)\(^5\).

II. Process of evolution

1. In the first phase, a *banpala-sanad* was developed for the forests of East No. 1, 2, 3 and 4, which was finally endorsed in May 1908, after interaction between the various authorities at the centre (see Appendix IX).

2. Accordingly, *banpala-sanads* were issued for many of the forests in East No. 1, 2, 3 and 4 (thus *banpala-sanads* for various forests in Dolakha district were issued in 1965 and 1966).

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\(^1\) The original document is with Mr. Buddhi Bahadur Shrestha of Melung. I traced it during my field work.

\(^2\) The original document is with Mr. Bhanu Bhakta of Birauta, Melung. I traced it during my field work.

\(^3\) A copy of this document was submitted to the Dolakha district forest office when a conflict arose over some parts of the forest mentioned in the document.

\(^4\) I received a copy of this document from Mr. Jagannath Adhikari.

\(^5\) Source same as for d.
3. When a report was submitted for legal action against the offenders in East No. 1 and 2 for cutting trees, it was endorsed through khadganisan in Magh 10, 1966 to protect forest and prohibit cultivation in the forest in the west in the same manner as in the east.

4. Accordingly, banpala-sanads were issued for the forests in West No. 1, 2, 3 and 4 also.

5. A report was submitted by ban-goswara on Paush 3, 1968 (December 1911) regarding:

   i. issuing banpala-sanads for forests in the territory of ilaka adda and gaunda of the hills region

   ii. initiating legal action and punishing those talukdars of East (No. 1, 2, 3 and 4) and West (No 1, 2, 3 and 4), who did not apply to the office for banpala-sanad.

6. Approval was made on Baishakh 14, 1969 (April 1912). But the order was made to issue sanad only to the talukdars of East (No 1, 2, 3 and 4) and West (No. 1, 2, 3 and 4). So nothing was mentioned regarding the issuing of sanad to the talukdars in the territories of other ilaka adda and gaunda of the hills region.

7. Again an application was submitted by the ban-goswara for approval to issue sanad to all talukdars and raitis of all hills regions regarding the forests, in the same form as had been issued for East (No 1, 2, 3 and 4) and West (No. 1, 2, 3 and 4).

8. This was recommended by muluki-adda.

9. Finally it was endorsed in Chaitra 22, 1969 (April 1913), by which it became effective throughout the hills region (nothing is mentioned for Kathmandu valley).

10. Text of the banpala-sanad.

   i. Do not allow anyone to cut green trees.

   ii. Do not allow anyone to light fires.

   iii. Do not allow anyone to clear forest for cultivation or to practice slash and burn.

   iv. Do not allow anyone to hunt game or lay traps.

   v. Do not allow anyone to commit indiscriminate acts.

   vi. Do not do any of the above things yourself too.

   vii. Use reasonably dry and fallen trees for firewood, with consultations between each other (talukdar and raiti).

   viii. Where green trees are to be cut for building houses, cattle-sheds, inns, bridges or river crossings, consult the raiti if the wood is required for talukdar and vice versa.
ix. Take (according to viii) reasonable quantities of these products in the following order of priority:

- trees with dried or fallen main shoots or branches.
- branches
- over-mature trees.
- other trees but ensuring that the forest is not opened and damaged.
- trees from areas of dense forest, other than trails, resting places, sources of irrigation canals, religious sites, sandisarpan and water-holes for cattle, ensuring that such practice will not open the forest unevenly and will improve the forest with weeding.

xii. Where the wood is required for government works, follow the instruction of the document issued for that purpose.

xiii. If anyone contravenes these provisions, arrest him and take him to the district jangi-parth, mal, adalat or adda, whichever is nearest, and punish him in accordance with the Act.

xiv. You will be punished if, during the visit of daudaha, forest is found indiscriminately felled, cleared or damaged.

xv. So understand these orders and protect the forest.

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1 This provision is not in documents (f) and (g) listed in (I) above.
Appendix XIII: Evolution of forest legislation

Chapter "On Cutting Trees" in Legal Code 1854

1. Any person who cuts trees in areas where this has been prohibited through royal or other orders, or in guthi, birta, bekh, chhap, or other lands belonging to others, shall be punished with a fine at the rate of Rs 4, 3, 2 or 1 per tree depending on whether the tree is abal, doyam, sim or chahar. The timber shall then be restored to the owner.

2. Even the owner shall not cut trees that have been planted on roadsides, water springs or irrigation channels. Any person who cuts such trees shall be punished with a fine at the rate of Rs 4, 3, 2 or 1 per tree depending whether the tree is abal, doyam, sim, or chahar. He shall also not be allowed to retain possession of the timber. If he does not pay the fine, he shall be imprisoned according to the law.

3. Throughout the Kingdom of Gorkha, including the Tarai region, owners of guthi, sadavarta, bekh, chhap and manachamal lands, taxable lands, and phikdar lands which have been granted on conditions similar to jagir, and jagirdar, shall not cut trees on their lands with the intent of selling the timber. However, they may (cut trees on their lands) for constructing houses, gardens and orchards. In case any person (of the categories mentioned above) cuts trees (in forests owned by him) and sells the timber after the commencement of this law, the proceeds of such sale shall be confiscated, and an equal amount shall be collected as fine. In case he does not pay the fine, he shall be imprisoned according to the law.

4. A birta-owner may cut and sell the trees on lands situated within the boundaries of his birta. He shall not be deemed to have committed any offence if he does so.

Chapter "On Cutting Trees" after amendment of Legal Code in 1918

1. It is Prohibited to cut trees in areas where this has been prohibited by official order or notification, on lands having no title, along roads, water springs, or irrigation channels, at places where such acts will lead to damage, or in forests under the jurisdiction of kathmahal.

2. A birta-owner can cut and sell trees from the birta lands in the hills except in the prohibited area.

3. It is prohibited to cut trees in the forests on birta, bekh, phikdar, chhap, sadavarta, and manachamal lands in the Tarai region, if from east of the Mahakali to west of the Mechi, without the permission of the prime minister.

4. (It explains about the procedures to get permission for cutting the trees from the forests on birta lands in the Tarai region, other than forest located in the Mahabharat area, and those where elephants and rhinoceros live or roam about.)
5. Where any person reports that he has raised a forest on a particular land under *raikar* or *jafati* tenure in consultation with the villagers, but that the forest has remained unprotected because of the absence of an official order, demands an official order granting him authority to raise a forest in specified areas other than those owned or cultivated by another person, and in case the inhabitants of the adjoining area are found to have expressed their consent in writing, a *banpala-sanad-rukka*, granting the applicant authority to raise a forest on such land, and mentioning the particulars contained in such document, shall be issued.

6. (This prescribes the punishment for cutting trees in *birta* forests in the Tarai without permission.)

7. When punishing those who cut trees, fine them Rs 4, 3, 2 or 1 per tree depending on whether the tree is *abal*, *doyam*, *sim* or *chahar*, except for trees of the ten listed species. Punish according to the consent of prime minister for cutting trees of ten listed species.

Clauses 8 to 14 dealt with the legal and administrative procedures.

15. Where trees in the forests in the Tarai or hills regions, other than those within the jurisdiction of *kathmahals*, are cut for land reclamation, complaints filed against the person responsible for such cutting shall be heard only so long as he is available; no such complaint shall be heard if he is no longer available.

Chapter "On Cutting Trees" after amendment of Legal Code in 1935

1. (This revises the existing provisions of 1918. Trees on *chautara*, irrigation water sources, and religious sites were also included as prohibited trees. In addition nobody was allowed to cut trees in the forests under *kathmahal* jurisdiction, without permission.)

2. (This emphasised the need to follow the terms and conditions specified in the order regarding the issuing of permits and their use by the permit holders.)

3. A *birta*-owner in the hills region has the right to use only dead, dried, and fallen trees from his *birta* forests which have been protected by the order. However he can cut green trees with permission if granted. A *birta*-owner in the hills region can use, at his discretion, all the trees from his *birta* forests which are not protected by the order. Those who cut prohibited trees or trees in prohibited forests without permission, or are involved in buying, selling or damaging such trees, will be punished under Clause 6.

4. Same as Clause 3 of 1918.

5. Same as Clause 4 of 1918.

6. Same as of Clause 6 of 1918

7. Same as Clause 5 of 1918
8. (This prescribes the schedules of penalties, which are broadly as follows:

- Penalties are based on the region. Sal, sissoo, karma, satisal, bijasal, simal, tooni, kusum, jamun, boddhairo, asna, pajan and khair under the territory of kathmahal in the Tarai region, and sal, sallo, champ and okhar in the hills region are placed in the one schedule.

- Penalties are based on the quantities involved.

- Penalties for the species other than those listed above are according to the quality of the tree, which is based on the stump girth of the tree irrespective of height. Trees with girth 2 ft or under are categorised as chahar, 2 to 3 ft as sim, 3-4 ft as doyam, and 4 ft or over as abal.

- Additional penalties for cutting trees on protected sites.)

9. (This prescribes the penalties for infringing the terms and conditions of permits.)

10. (This prescribes the penalties for diverting the use of the forest products supplied free of cost for domestic and social works.)

11. (This prescribes the penalties for using other people in conducting prohibited activities.)

12. (This prescribes the penalties for not reporting (known) offences relating to the protected forests.)

13. (This prescribes the procedures for valuation of forest products.)

14. Same as Clause 8 of 1918.

15. Same as Clause 9 of 1918.

16. Same as Clause 10 of 1918.

17. Same as Clause 11 of 1918.

18. Same as Clause 13 of 1918.

19. (This prescribes the penalties for the offences not listed.)

20. Maximum imprisonment under this Act is 12 years.

21. Same as Clause 15 of 1918.

Chapter "On Cutting Trees" after amendment of Legal Code in 1948

The only major amendment was to Clause 7. Clauses 15 and 18 were slightly changed. The rest remained unchanged.

Clause 7, after amendment reads as: "In case any person reports that he has raised a forest on a particular land under raikar or jafati tenure in consultation with the villagers, but that the forest has remained
unprotected because of the absence of an official order, demands an official order granting him authority to raise a forest in specified areas other than those owned or cultivated by another person; or a gaunda, goswara or forestry authority felt the necessity of protection of any forests; and in case the inhabitants of the adjoining area are found to have expressed their (majority) consent in writing, and the forest is found to be protected, a banpala-sanad-rukka in the name of chitaidar, instructing any local raiti-duniya to consult the chitaidar if the raiti-duniya needs timber and vice versa, i.e. chitaidar has to consult raiti-duniya whenever he needs timber, shall be issued."

Forestry legislation after 1957

Private Forest Nationalization Act 1957
Hunting Rules 1963
Forest Engineering Rules 1963
Forest Protection (Special Arrangements) Act 1967
Panchayat Forests Rules 1978
Panchayat Protected Forest Rules 1978
Leasehold Forest Rules 1978
Private Forest Rules 1984
Appendix XIV: Code promulgated by Ram Shah (1606-33)

[The text of this code is annexed in the Muluki-ain (HMG, 1965) and consists of 25 codes dealing with various aspects of the life of the people. Following is the list of codes, and the codes relating to the forest are explained.]

1st code: (Relates to appointment of royal guru.)

2nd code: (Relates to standardisation of measures of volume.)

3rd code: (Relates to standardisation of measures weight.)

4th code: (Relates to interest rates for grain transactions.)

5th code: (Relates to interest rates for monetary transactions.)

6th code: (Relates to resolving conflicts arising over drinking-water tanks.)

7th code: (Relates to resolving conflicts arising over oil extracting spots.)

8th code: (Relates to resolving conflicts arising over irrigation water.)

9th code: (This code deals with the system of granting birta to Brahmans and it states that all land belongs to the king.)

10th code: (Whenever allotting land as guthi or birta to a Brahman, the presence of five people from the adjoining area was necessary to ensure that such arrangements would not cause any inconvenience to local people.)

11th code: (Relates to institutionalising the families for discharging the responsibility of justice.)

12th code: Maintain gauchar. Without such a facility Brahmans will suffer hardship in maintaining cows and ultimately the King has to bear sin. So maintain gauchar in every village considering the convenience in their prevailing exit and entry routes.

13th code: Maintain trees along paths. This is because the poor and people suffering hardship will get tired after work, porters will be tired with loads, and others too, whosoever, will wish to relax in the shade of trees. So maintain trees along trails and fine rupees five whosoever cut such trees.

14th code: Maintain trees around water springs. In the absence of trees, water will not last all through the year and the spring will run dry. If forests are cleared on a massive scale, there will be many landslides. Landslides will flood (catastrophic) that could wash away even khet. Household works cannot be sustained without forests. Thus fine rupees five whosoever cut trees round water sources.

15th code: (Relates to penalties for various crimes.)
16th code: (Relates to penalties for various crimes)

17th code: (Relates to wearing golden jewels.)

18th code: (It is stated that this portion is missing in the main document.)

19th code: (Relates to the appointment of four priests.)

20th code: (Relates to the appointment of priests.)

21st code: (Relates to the system of worship.)

22nd code: (Relates to awards and allocations of responsibility.)

23rd code: Use the crop from newly reclaimed land for three years. From the fourth year submit *dhani-boti* (owner's share) to the *talsing* and retain *bani-boti* (tenant's share) for the cultivator.

24th code: (Relates to the enlistment of sub-castes.)

25th code: (Relates to the establishment of mutual relations with the King of Patan.)
Appendix XVA: Questionnaire for household study

Panchayat:-
Village:-
Name of the family head:-
Name of the oldest member:
Ethnic/caste group:-
No of cattle:
No of family member:-
Land holding:-

<table>
<thead>
<tr>
<th>S.No</th>
<th>Products</th>
<th>Past 20 yr ago</th>
<th>Present 5 yr ago</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Firewood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Fodder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Timber</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Leaf-litter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Fencing post</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Poles for animal shed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Jhikra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Danda-bhata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Thatching</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Ceremonial pole</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Fruits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Leaves for a. Umbrella</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Rope material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Bamboo for chuya</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Tool-handles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Pole for swing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Wood for dhiki</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Furniture wood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Wood for tauwa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Firewood for cremation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Forest products for industry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Forest material for dam</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Medicinal herbs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Wood for a. school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Grazing land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Panighat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Cremation site</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Soil for house wall painting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Stone etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are you free to collect any quantity of any product in any time?
yes/no ,
If no ,what is controlled? forest product quantity time
Who controls?
When this controlling system was initiated?
Who initiated this system?
Why this system was initiated?
In which forests?
Any changes made after? yes/no
If yes ,what were the changes made?
Appendix XVB: Check-list for user household study

1. Name of forest- Location of forest - present panchayat - ward
   20 yrs ago -
   5 yrs ago -
2. User's settlement - present panchayat - ward
   20 yrs ago -
   5 yrs ago -
   village - sub-village -
3. Name - no. of family -
   age - sex
   ived in this village since -
   ethnic/caste group -

4. Employment

5. Where do you get the forest products for your need ?
   Government forest -
   Communal forest -
   Private forest -

6. Is there any control in getting the product ?
   a. Control in some particular forest ?
   b. Control in some products ?
   c. Control in quantity ?
   d. Control in some time of the year ?

7. Are there any changes made in controlling system after initiation ?
   If so when ?
   What changes ?

8. Institutional issues of management
   a. When the system was initiated ?
   b. What was the circumstances ?
      i. Lack of forestry products ?
      ii. Control of used forest by other village ?
      iii. Instituted by some individual ?
      iv. Some orders issued by authority ?

9. Why this land/forest was selected for development/protection ?
   a. Being convenient for all .
   b. Land being available .
   c. Being potential for preferred species .
   d. Being already good forest .
   e. Not potential for agriculture .
   f. Not being any dispute .

10. What type of land was it before ?
    a. Private
    b. Communal
c. Birta
d. Government
e. Land owned by absentee landholder

11. What type of forest was it before?
a. Dense forest
b. Degraded
c. Barren land
d. Abandon agriculture

12. What activities were initiated?
a. Protection
b. Planting
c. Thinning
d. Climber cutting

13. Protection
   Protection from when by whom
   a. Cattle
   b. Users
   c. Outsiders
   d. Fire
e. Other

14. How the understanding was concluded?

15. How the decision is made regarding
   a. Encroachment by non-user
   b. Encroachment by user
   c. Illicit cutting
   d. Conflict

16. Is there any understanding regarding the species, part of the tree, condition, maturity class, specified area for collection?

17. Is there any time allocated for collection of forest products?

18. Is there quantity specified for the various products?

19. Is there any system of lopping, pruning, and felling?
a. Size
b. Form
## Appendix XVI: List of key informants

### 1. Betini forest

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>About key informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khila Nath Sigdel</td>
<td>70</td>
<td>Tallotigaun, priest</td>
</tr>
<tr>
<td>Ban Bahadur Dhungana</td>
<td>45</td>
<td>Pakhure, vice-chairman of the local forest committee.</td>
</tr>
<tr>
<td>Dhan Bahadur Timilsena</td>
<td>54</td>
<td>Pakhure</td>
</tr>
<tr>
<td>Chandra Man Shrestha</td>
<td>93</td>
<td>Pakhure, oldest person in the Newar community</td>
</tr>
<tr>
<td>Hem Bahadur Lama</td>
<td>72</td>
<td>Madanpur (non-user), former local functionary, informative for the forestry matters of the past.</td>
</tr>
<tr>
<td>Sundar Man Lama</td>
<td>69</td>
<td>Upallotigaun</td>
</tr>
<tr>
<td>Kina Ram Lama</td>
<td>69</td>
<td>Upallotigaun</td>
</tr>
<tr>
<td>Kaman Singh Tamang</td>
<td>57</td>
<td>Pakhure, forest watcher since 1960</td>
</tr>
<tr>
<td>Mukti Nath Gajurel</td>
<td>56</td>
<td>Upallotigaun, one of the person refereed in Appendix III.</td>
</tr>
<tr>
<td>Bir Bahadur Tamang</td>
<td>46</td>
<td>Tallotigaun, son of former functionary, possessing the document(Appendix II)</td>
</tr>
<tr>
<td>Basanta Bahadur Lama</td>
<td>50</td>
<td>Pakhure, chairman of local forest committee.</td>
</tr>
<tr>
<td>Toran Bahadur Pande</td>
<td>70</td>
<td>Tallotigaun</td>
</tr>
<tr>
<td>Dambar Bahadur Sigdel</td>
<td>70</td>
<td>Pakhure</td>
</tr>
<tr>
<td>Nanda Kumari Paneru</td>
<td>61</td>
<td>Pakhure</td>
</tr>
<tr>
<td>Chandra Bahadur Sunar</td>
<td>35</td>
<td>Tallotigaun</td>
</tr>
<tr>
<td>Sindhu Tamang</td>
<td>70</td>
<td>Upallotigaun</td>
</tr>
<tr>
<td>Lok Jung Pande</td>
<td>36</td>
<td>Tallotigaun, headmaster of local middle school.</td>
</tr>
</tbody>
</table>
## 2. Kamang forest

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>About key informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marsyang Ghising</td>
<td>68</td>
<td>Multol, wife of former functionary</td>
</tr>
<tr>
<td>Dil Bahadur Magar</td>
<td>79</td>
<td>Khanigaun, a signatory of the document (Appendix V)</td>
</tr>
<tr>
<td>Suk Man Tamang</td>
<td>54</td>
<td>Multol, ward-chairman, son of former functionary.</td>
</tr>
<tr>
<td>Purna Man Tamang</td>
<td>58</td>
<td>Multol, son of former functionary</td>
</tr>
<tr>
<td>Harka Bahadur Bisokarma</td>
<td>68</td>
<td>Pata, working as local gold-smith</td>
</tr>
<tr>
<td>Krishna Bahadur Adhikari</td>
<td>45</td>
<td>Pata, descendant of functionary of Rana birta holder</td>
</tr>
<tr>
<td>Bhima Tanjo</td>
<td>75</td>
<td>Pata, oldest person in the village</td>
</tr>
<tr>
<td>Kumar Singh Tamang</td>
<td>80</td>
<td>Naiketol, a signatory of document (Appendix V)</td>
</tr>
<tr>
<td>Dhan Bahadur Tamang</td>
<td>68</td>
<td>Naiketol, a signatory of document (Appendix V)</td>
</tr>
<tr>
<td>Pema Dorje Tamang</td>
<td>68</td>
<td>Multol, a signatory of document (Appendix V)</td>
</tr>
<tr>
<td>Surya Bahadur Tamang</td>
<td>66</td>
<td>Pata, former locally employed forest watcher</td>
</tr>
<tr>
<td>Marta Singh Tamang</td>
<td>84</td>
<td>Purangaun, oldest person in the village and a signatory of document (Appendix V)</td>
</tr>
<tr>
<td>Takhat Singh Tamang</td>
<td>73</td>
<td>Naiketol, a signatory of document (Appendix V)</td>
</tr>
<tr>
<td>Kul Man Bisokarma</td>
<td>64</td>
<td>Pata, ward-chairman, member at the allocation of forests in 1961</td>
</tr>
<tr>
<td>Tej Bahadur Ghising</td>
<td>38</td>
<td>Multol, chairman of local forest committee, son of former functionary</td>
</tr>
<tr>
<td>Bali Man Tamang</td>
<td>39</td>
<td>Multol, nursery naike</td>
</tr>
<tr>
<td>Nang Sri Tamang</td>
<td>69</td>
<td>Purangaun, source of information regarding the protection efforts in Kamang</td>
</tr>
<tr>
<td>Amrit Singh Tamang</td>
<td>77</td>
<td>Purangaun, a signatory of document (Appendix V)</td>
</tr>
</tbody>
</table>
3. Sallepakha Forest

<table>
<thead>
<tr>
<th>Name</th>
<th>age</th>
<th>About key informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dhan Das Shrestha</td>
<td>76</td>
<td>Melung, migrated from Ramechhap in his father's time 60 years ago, involved with the conflict over Sallepakha forest.</td>
</tr>
<tr>
<td>2. Babu Lal Tamang</td>
<td>79</td>
<td>Hile, son of local functionary</td>
</tr>
<tr>
<td>4. Khadga Das Shrestha</td>
<td>69</td>
<td>Melung, migrated from Ramechhap in his father's time 60 years ago, involved with the conflict over Sallepakha forest.</td>
</tr>
<tr>
<td>5. Lalit Bahadur Karki</td>
<td>92</td>
<td>Sisneri, retired subedar of jangi-pareth, former pradhan-pancha, and influential person in the area.</td>
</tr>
<tr>
<td>6. Indra Bahadur Tamang</td>
<td>75</td>
<td>Sanumilti, affected by document (Appendix XI)</td>
</tr>
<tr>
<td>7. Bala Ram Tamang</td>
<td>35</td>
<td>Nigasi, source of information regarding the recent attacks in Sallepakha</td>
</tr>
<tr>
<td>8. Lal Bahadur Tamang</td>
<td>81</td>
<td>Nigasi, oldest person in the village</td>
</tr>
<tr>
<td>9. Krishna Bahadur Shrestha</td>
<td>80</td>
<td>Melung, knows more about Sallepakha</td>
</tr>
<tr>
<td>10. Mani Raj Shrestha</td>
<td>80</td>
<td>Melung, former jimmuwal</td>
</tr>
<tr>
<td>11. Dhan Kumari Shrestha</td>
<td>85</td>
<td>Melung, oldest person in the village</td>
</tr>
<tr>
<td>12. Rekha Thakuri</td>
<td>80</td>
<td>Katike, oldest person in the village</td>
</tr>
<tr>
<td>13. Lal Bahadur Khatri</td>
<td>65</td>
<td>Former chitaidar of Sallepakha</td>
</tr>
<tr>
<td>14. Maili Damini</td>
<td>60</td>
<td>Melung</td>
</tr>
<tr>
<td>15. Laxman Bhandari</td>
<td>61</td>
<td>Nigasi, currently plantation watcher,</td>
</tr>
</tbody>
</table>
Appendix XVII: Other historical documents

[All the documents in this appendix are from various issues of Regmi Research Series (RRS), covering 1969 to 1989, to which I again acknowledge my debt. I have tried to adapt as it is in RRS. Some minor changes, particularly in spelling, have occurred in correcting the typing error or in order to follow consistency in the whole thesis. However, in few instances, the title have been given to suit the context of the text.]

List of documents
1. Regulations of King Mahendra Malla
2. Depredations of tigers
3. Supplies for Jagannath temple
4. Jhara labour for supply of firewood
5. Jhara labour for supply of timber
6. Purchase of sal gum
7. Jhara for transporting timber
8. Transporting timber for Jagannath temple
9. Forest conservation in Belkot
10. Transporting timber from Nuwakot
11. Transporting timber from Nuwakot
12. Firewood for Jagannath temple
13. Ban on killing rhinoceros
14. Reclamation of land in Majhkirant
15. Rhinoceros hunting
16. Land reclamation in far-eastern hills region
17. Ban on export of wax
18. Supply of charcoal
19. Supply of firewood
20. Gunpowder factories
21. Supply of cane for jholanga
22. Timber for sanghu and boat
23. A manachamal grant in Belkot
24. Supply of timber for munition factory
25. Management of temple
26. Supply of cane for jholanga
27. Forest protection in Harmi, Gorkha
28. Supply of firewood from Patan
29. Supply of charcoal from Thecho
30. Forest protection in Kathmandu valley
31. Growing forest in Mahabharat region
32. Forest in Sindhuli-Makawanpur region
33. Forest protection in Kathmandu valley
34. Regulation for Chisapani-gadhi
35. Check-posts in Mahabharat region
36. Forest protection in Sisneri, Lalitpur
37. Forest protection in Bhadgaun
38. Pasture land in Panchgaun, Salyan
39. Supply of charcoal
40. Forest protection in Kafal-danda and other areas, Nuwakot
41. Timber export to India
42. Check-post in Ambas, Salyan
43. Forest protection in Tanahu, Lamjung and Kaski
44. Forest protection in Bhirkot, Syangja
45. Forest protection in Sarangkot, Kaski
46. Instructions to chief of administrative districts.
47. Forest protection notification
48. Forest protection in Bhirkot, Syangja
49. Ban on *birta* grants
50. Forest protection in Gorkha
51. Forest protection in Dolakha
52. Forest protection in Dhoksi, Sindhuli
53. Forest protection in Chisankhu, Okhaldhunga
54. Forest protection in Phulping Sindhupalchok
55. Forest protection in Bode, Bhadgaun
56. Forest protection in Kabhrepalanchok
57. Forest protection in Sindhupalchok
58. Pasturage facilities in forest in Garhun, Tanahu
59. Supply of charcoal
60. Timber supply from Sindhupalchok
61. Transportation of timber
62. Forest protection in Machhegaun, Lalitpur
63. Forest protection in Kathmandu valley
64. Forest protection in Garhun, Tanahu
65. Forest protection in Dolakha
66. Ban on clearing forest for agriculture, Dolakha
67. Forest protection in Gorkha
68. A lac plantation in Pallokirant
69. Forests protection in Harihar cave in Kaski
70. Forest protection in Parbat
71. Forest protection in Rising, Tanahu
72. Forest protection in Syangja
73. Land allotment in Dolakha
74. Forest protection in Bhirkot, Syangja
75. Supply of timber to munition factory
76. Kathmahal regulations for *naya-muluk*
77. The wax and paper monopoly
78. Forest protection in Nawalparasi
79. Supply of firewood from Bulu
80. Pasture lands in Jumla
81. Forest protection in Bhimphedi-Hetauda region
82. Timber export trade and appointment
83. Forest protection in Kaski
84. Inquiry into clearing protected forests
85. Sale of old timber stocks
86. Lac export from far western region
87. Amalgamation of *kathmahals*
88. Timber supply for Rana palaces
89. Forest regulations
90. Timber export from *birta* forests
91. *Birta* forests of Rana
92. Timber export trade from Tribeni, Nawalparasi
93. A report from Olangchunggola
94. Forest and wildlife conservation
95. Forest regulations
96. Export of wax, honey etc.
97. Proceed of timber from birta forest
98. Sale of timber from Kanchanpur
99. Sale of timber from Babai, Bardiya
100. Forest protection in Kathmandu valley
101. Forest regulation in birta forests.
102. Forest conservation in Morang
103. Forest protection in Tarai and inner Tarai
104. Birta grants to Prime Minister Bir Shumshere
105. Forests around Harihar cave in Kaski
106. Sale of forest products in the far-western Tarai region
107. Firewood for brick kilns
108. Abolition of rakam-goswara and khair-adda
109. Reclamation of forest area
110. Abolition of Ilam-dwar kathamahal
111. New chief of Chhatauna-Jamuni-dwar kathamahal
112. New chief of Banaganga-dwar kathamahal
113. Abolition of Babai-dwar kathamahal
114. Kathmahals at the end of 19th century.
115. Revenue collection from birta land
116. Saw mills in Tarai region
117. Abolition of Tribeni dariyabudi-adda
118. Kathmahals in Nawalparasi
119. Problems of tax collection
120. Conservation of musk-deer
121. Ban on production and sale of pine torches
122. A birta grants to Prime Minister Bhim Shumshere.
Subjects:

The (inhabitants) of all the 26 tols, including the ryots, thakalis and manes of our neighbouring Pukhatol and Chhabahal, and Gocha Gubhaju, Manya Jha, Kirtikanta, Surjekhu Dangol, Kaucha Deubhaju, Upacha and Brahmanarsimha of the 14 tols, held a meeting to discuss measures whereby famine and hailstorms could be averted in Nepal.

Kali Brahmacharya Tantrik then performed mystic rites (Purashcharana), whereupon (Goddess) Taleju granted these regulations to Maharaja Mahendra Malla in a dream at mid-night during the bright half of the moon:

There shall be no gambling among the subjects.
Always do good to the subjects.
Speak the truth.
Disputes in tols and villages shall be settled by local kachaharis (courts of Justice)

The Kachahari in any tol or village shall be composed of a thakali and a mane, who shall be mature persons. (Such a kachahari) shall dispense justice.

Dhiki, grindstones, handlooms and spinning-wheels shall never be kept idle.

Misfortune will result if Patasi, and other (gharbuna, khadi, kora) homespun cloth is not woven according to a uniform pattern.

For lamps, torches and wicks, go to the forests and use devadaru (wood)

If cloth is woven continuously, it can be made soft and white like paper.
In that event, you can sell it to kings in the hills (gamal) and plains (madesh) and become rich.

In case you visit the territories of other kings, learn new skills, such as those (relating to the manufacture of) pots and utensils, and thus steal work, the honour of your country and the prestige of the subjects will increase.
For doing any work, send spies to different kingdoms and learn new skills, If, while doing so, they are known and caught, they shall not betray the secrets of their country. Let them die if they are killed. Learn and bring pure skills, without violating the path (dharma) shown or followed by your customs and traditions, old people and family.

Another regulation:

I shall proclaim by beat of drums: Nobody throughout the kingdom shall remain unfed after-noon. When I sat down to have my meal only after obtaining information that you had taken your rice, I suffered from indigestion, so that my stomach was filled with wind and my mouth emitted sour water. Accordingly, everybody throughout the kingdom shall take his rice within 9 or 10 ghadis after daybreak in the morning,
within 8 to 10 ghadis (after dusk) in the evening. One moment (nimesh) after the expiry of 10 ghadis, ring a bell. In case anybody violates this order, he shall be punished. If any subject remains hungry, penalty for the sin accruing on that day shall be borne by the thakali and mane of that tol.

Document-2

Depredations of tigers, July 1796
(RRS, 1985 p. 173)

Royal order (Shrawan badi 2, 1853) to the mijhars of Tistung, Palung and Chapyangaun: "We have received reports that many people have been killed by tigers there. Take proper care of the areas under your jurisdiction. If such incidents occur again in the future, we shall send an expert gurau and punish the person in whose village they occur. Let not anyone be killed by tigers in future."

Document-3

Supplies for Jagannath temple, August 1796
(RRS, 1986 p. 27-8)

1. Royal order (Bhadra badi 11 1853) to the amalidar, birta-owners, and other land owners in Jiunpur: "Each household of that area shall supply one load of babiyo (i.e.sabai grass) consisting of twenty dharnis of jhara basis for the construction of the Jagannath temple in Kathmandu, Any one who does not comply with this order shall be severely punished.

2. The order was sent separately to the following areas also on the same data:

   Gajuri, Bisankhu, Chitlang, Kewalpur, Lamidanda, Jhiltung, Pinda, Phokatpur, Tamaguru, Katuwalpauwa, Belkot, Bhirpani, Deurali, Deopur, Sipa, Jarayotar, Sindhu, Mandan, Sangachok, Phulbari, Sangakot, Dapcha, Buchakot, Ainselu and Panauti. The place names are missing in two documents which have been damaged by insects.

Document-4

Jhara labour for supply of firewood, October 1796
(RRS, 1988 p. 106)

On Katik badi 5, 1853, the following royal order was sent to the Amalidars of the following areas:

"This year, we are undertaking construction of a temple of Shree Jagannath. Accordingly, you are ordered to impress all inhabitants of the area under your jurisdiction on jhara basis and send them to the Itachapali office on the . . . day of Katik along with axes and khukuris and provisions for . . . months for cutting firewood in order to bake bricks."

(1) Listi (2) Dolakha (3) Tauthali (4) Helma
(5) Palanchok (6) Barhatimal (7) Thek-Theni (8) Different areas in Parbat
(9) Different areas in Kaski (10) Different areas in Lamjung
Document- 5

Jhara labour for supply of timber, October 1796
(RRS, 1988 p. 106)

On Katik Badi 5, 1853, the amalidars of Changu and Pharping were ordered to impress jhara labour in the area under his jurisdiction for the supply of timber needed for a 200 cubit long shed for construction of the temple of Shree Jagannath.

Document- 6

Purchase of sal gum, October 1796
(RRS, 1988 p. 109)

Royal order (Katik sudi 14, 1853) to subba Dinanath Upadhya:-

It is necessary to complete the construction of the Shree Jagannath temple quickly. It appears that large quantities of sal gum are required for this purpose. The price of such gum is very high, but even if we pay a high price, it is not possible to procure 500 or 700 maunds. You are, therefore, ordered to purchase 900 maunds of sal gum in Patna, transport it by oxen or boats as appropriate and deliver it to subba Indra Simha's men at Hetauda within the month of Paush. Payment shall be made, and transport costs up to Hatiouli met, from the Magh-Falgun instalment of payments stipulated for the ijara for revenue collection in Saptari and Mahottari for the Vikrama year 1853. Arrange for early supply, as otherwise work will be hampered.

Inquiries from local traders have revealed that the price of sal gum in Patna ranges between 1.25 rupees and 2 rupees a maund. Purchase the commodity at the cheapest possible price and dispatch it quickly.

You are also ordered to supply 1200 dharnis of rang (manganese) as quickly as possible.

Document- 7

Jhara for transporting timber, December 1796
(RRS, 1988 p. 108)

The inhabitants of different areas in Tanahu, Salyan, Dhor, Basantapur, Khirkit, Dordor, Tambakot, Chokde, etc were ordered (Marga sudi 15, 1853) to reach Hetauda by the 22nd day of the month of Paush 1853 with sufficient food for four months on jhara basis for transporting timber from Hetauda to the royal palace in Kathmandu for construction of the temple of Shree Jagannath.

The order was sent separately to the amalidars of the following areas also: Kathmandu, Patan, Bhadgaun, Sipa, Palchok, Jyamire, Sindhu, Sangachok, Phatakshila, Baguwa, Sanipalati, Thupilalati, Jarayotar, Bujulikot, Ramkot, Betali, Namadi, Jafe, Katakuti, Namdu, Bhanwarkot, Mahadev-pokhari, Timal, Sajakot, Buchakot, Phulbari, Dapcha, etc.
Document- 8

Transporting timber for Jagannath temple, January 1797
(RRS, 1988 p. 108)

The *amalidar* of Nuwakot was ordered (*Paush badi* 30, 1853) to send all inhabitants of the area under his jurisdiction to transport bricks and timber on *jhara* basis for construction of the temple of *Shree Jagannath*. They were also ordered to bring with them sufficient food for five or six months.

Document- 9

Forest conservation in Belkot, May 1797
(RRS, 1988 p. 136)

Royal order (*Jestha badi*, 1854) to the *amalidar* of Belkot: "The Betyani (Betini) forest in Belkot (Nuwakot) had been conserved from former times. We have now received reports that cane and trees are being cut there. We hereby proclaim that any one who cuts timber in that forest will have his hand cut off. Announce this to every one there, and conserve the Betyani forest properly."

Document- 10

Transporting timber, July 1797
(RRS, 1989 p. 121)

On *Shrawan* Sudi 15, 1854, the *amalidar* of Bhadgaun was ordered to provide *jhara* labourers for transporting timber from Belkot (Nuwakot) to the Ranipokhari in Kathmandu.

Document- 11

Timber from Nuwakot, October 1797
(RRS, 1989 p. 64)

The landowners and other inhabitants of different villages in the following areas were ordered (*Katik badi* 14, 1854) to provide *jhara* labour for the transportation of timber from Budhasing (Nuwakot) to Kathmandu for the construction of the Jagannath temple. They were also ordered to bring their own food sufficient for six months. Only those who had been enrolled as *hulakis* were exempted from this obligation:


On the same date (1854.07.14), the inhabitants of town and villages in Kathmandu, Bhadgaun and Patan were ordered to supply 20 *dharnis* of firewood from each household for the construction of the Jagannath temple.
Document- 12

Firewood for Jagannath temple, July 1798
(RRS, 1988 p. 1-2)

On Shrawan Badi 3, 1855, the inhabitants of the Thak and Theni areas were given the following options in connection with supply of firewood for the construction of a Jagannath temple being built by king Ran Bahadur in Kathmandu:-

a) One person from each household shall provide jhara labour for the transportation of firewood, bringing along with him food needed by him over a period of six months, or
b) purchase 8,000 loads of firewood and deliver them at Kathmandu, or
c) pay a sum of Rs 2,001 in mohar and paisa coins used in Kathmandu, or
d) pay a fine of Rs 10 from each household.

Document- 13

Ban on killing Rhinoceros, November 1798
(RRS, 1971 p. 121)

From- King Rana Bahadur Shah, on Marga badi 13, 1855
To- Brahmananda Upadhyaya, subba (of Saptari)

There is a great need of rhinoceros (here). Rhinoceros are being killed in large numbers in the Tarai. You are therefore directed to prohibit everybody, whether belonging to the Moglan (i.e. India) or to our country, from killing rhinoceros. Capture baby rhinoceros and send them here.

Document- 14

Reclamation of land in Majhkiran, June 1799
(RRS, 1979, p. 171)

...Instructions issued (Ashad badi 14, 1856) in the name of subba badi 14, 1856) in the name of subba Jayawanta Sahi were as follows: "Make arrangements for the reclamation of land into rice-fields where irrigation facilities can be made available...

Document- 15

Rhinoceros hunting, December 1799
(RRS, 1979, p. 168)

The subba of Saptari and Mahottari was ordered (Paush sudi 5, 1856) to requisition the services of all hunters in the areas under his jurisdiction to hunt rhinoceros, but only to capture the male animals and send them along with other wild animals to the royal palace every year. The killing of female rhinoceros was prohibited.

The order was sent also to the subbas of Majhkiran, Morang, Bara-Parsa, Pallokirant and Chitawan-Belaun-Sajuat, and the amalidars of Tinpatan and Patringa.
Document- 16
Land Reclamation in the far-eastern hills, December 1799 (RRS, 1979 p. 167)

Royal order (Paush sudi 5, 1856) to Prithvidhar Padhya and Siddhikarna Padhya Ghimire making a grant of waste and kalabanjar lands at Syamban east of Arun river: "Reclaim these lands, dig irrigation. Settle people on the lands so irrigated. Any person who reclaims land and converts it into rice-fields shall, after the expiry of the stipulated period (bad-karar), report to us how much land he has thus converted. As elsewhere in the kingdom, such person shall remain secure on the basis of adhiya tenure, and shall not be evicted from land. He shall make payments at rates current in the area (khola). You shall be held responsible if irrigation channels are not dug, and if lands are not reclaimed as rice-fields.

Similar grants were made on the same date to (1) Bharath Padhya in the Chewthum area east of the Arun river, and (2) Balabhadra Padhya on the banks of the Tamor river, north of the Adhyari river and south of the Piguwa river.

Document- 17
Ban on export of wax, January, 1800 (RRS, 1979, p. 170)

On Magh Badi 9, 1856, a royal order was sent to local authorities, functionaries and land-owners (amali, subba, dware, ijaradar, umra, talab, bitalab-holders, mohoriyars) in the region east of the Dhobikhola river up to the Kankai and the Tista not to permit the export of even a single tola of the wax to the south (Madhes). The order added,"Employees of the main-bhansari (i.e. the individual responsible for the procurement of wax in a compulsory basis ). have been sent there. Supply them with wax at current rates against immediate payment in cash. Any person who wants to export wax to the south shall first bring his supplies to Nepal (i.e, Kathmandu valley). If, however, he exports wax directly to the south or if anybody permits him to do so, appropriate punishment shall be inflected."

A similar order was issued on the same date for the region west of the Bishnumati river up to the Bheri river.

Document- 18
Supply of charcoal, February, 1800 (RRS, 1978, 106-7)

1. Royal order (Falgun badi 3, 1856) to the dware, mahanes, and naikes of Thecho village ; "supply ...dharnis of charcoal to the magazine every day. Pay only half of the saunefagu tax. You need not provide unpaid labour (jhara) services for purposes other than the supply of charcoal. Pay rents on adhiya or kut basis, as well as other dues, in the rice lands cultivated by you. Landlords shall not evict you unless you damage the lands or commit any other offense. You shall be punished if you do not comply
with this order."

Similar orders were sent to the *dware, mahanes,* and *naike* of Banepa and Sankhu villages on the same date.

2. Royal order to the *dware, mahanes,* and *naike* of Lele village: "You have only been storing charcoal so far. In the future, only fifteen households in that village shall do so and make stacks; the other households shall manufacture and transport charcoal, and supply... dharnis to the munitions factory every day. Pay only half of the *saunefagu* tax. You need not provide unpaid-labor (*jhara*) services for purpose other than the supply of charcoal. Pay rents on *adhiya* or *kut* basis, as well as other dues, on the rice-lands cultivated by you. Landlords shall evict you unless you damage the lands or commit any other offense. You shall be punished if you do not comply with this order.

3. Royal order to the *dware, naike,* and *mahanes* of Dhulikhel (except twenty households), Khadup, and Chaukot: "Bhotes and Newars shall provide porterage services for the supply of charcoal. *Birta* and *chhap* owners of all categories shall do so for the supply of timber required for the manufacture of cannon, rifles, etc. Supply ...dharnis of charcoal to the munitions factory every day. Pay only half of the *saunefagu* tax. You need not provide unpaid-labor services (*jhara, beth, begar*) for purpose other than the supply of charcoal and transportation of mail and other materials (*hulak*). Pay rents on *adhiya* or *kut* basis, as well as other dues, on the rice-lands cultivated by you. Landlords shall not evict you unless you damage the lands or commit any other offense... you shall be punished if you do not comply with this order."

Document- 19

Supply of firewood, February, 1800

(RRS 1978 p. 105)

On *Falgun badi* 3, 1856, owners of *birta* and *chhap* lands in the region situated between the Bishnumati river and Bhimdhunga, including Kirtipur, were ordered to supply one man-load of firewood, every eight days for casting cannon at the munitions factory. They were granted exemption from unpaid-labor obligations (*jhara, beth begar*) for other purposes.

Document- 20

Gunpowder factories, March 1800

(RRS 1978, No 8, p. 5)

Royal orders (*Chaitra badi* 8, 1856) to the *dithas* of all gunpowder factories of Nepal (i.e. Kathmandu valley): "We hereby order you to produce one *muri* of gunpowder every day from year to year. Arrangements have been made for the supply of the following materials for this purpose:

Material required for producing 1 muri of gunpowder every day:-
1. Saltpetre (refined three times)........1 *muri*.
2. Saltpetre ..................................6 dharnis.
3. Firewood 20 loads of 10 dharni each.
4. Bark 3 loads of 4 dharni each.
5. Charcoal 3 loads of 3 dharni each.

Document- 21
Supply of cane for jholanga, April 1803
(RRS 1988, p. 149)

On Baishakh badi 11, 1860, the amalidar, dware, and jethabudha of Bandipur were ordered to supply 81 loads of cane for the construction of a jholanga over the Daraundi river in Gorkha.

Document- 22
Timber for sanghu and boat, March, 1804
(RRS 1988 p. 149)

On Chaitra sudi, 1860, the amalidars, dwares, jethabudhas and bicharis of Khurkot, Tatarkot, Bafi, Gyandi, Limi and Barhlewa were ordered: "From former times, the Durlung forest has been conserved for the supply of timber for the construction of sanghus and boats. We have accordingly prohibited the cutting of sal, sallo, tuni, semal and champ timber, as well as firewood and fodder, from that forest. Any one who acts in contravention of this order shall be severely punished."

Document- 23
A manachamal grant in Belkot village, June 1805
(RRS, 1989, p. 121)

A tract of 2 khet's of rice-fields, and the attached pakho lands and homesteads in Belkot village owned by the Tiwari family, had been mortgaged to the Lohani family against a payment of 900 rupees. A part of that amount had been paid by Chukhure Khawas. The lands were subsequently confiscated by the government in connection with an offense (khat), and remained under raikar tenure for 26 years. Chautariya Kirtimahoddam Shah then granted the lands as birta to Jasiwant Tiwari without royal permission. On Ashad badi 8, 1862, the lands were granted as manachamal to Kashinath through a royal order.

Document- 24
Supply of timber for munition factory, June 1805
(RRS 1973, p. 76)

From- King Girban (Ashad badi 11, 1862)

To- The amalis and inhabitants of the village mentioned below belonging to all the 4 castes and 36 sub-castes, other than those who supply timber and charcoal daily to munitions factories or grind gunpowder at gun-powder factories, as well as labourers employed for the supply of fodder (ghansi) and lumber-workers (bosi).

"Proceed to Malta in Chisapani-gadhi area on jhara basis and transport sal timber to ... obtain receipts and clearance from the officials appointed through sardar Indra Simha Thapa. Those who do not
provide *jhara* services in this manner shall be punished. Bring the timber quickly."

<table>
<thead>
<tr>
<th>Thankot</th>
<th>Dahachok</th>
<th>Satungal</th>
<th>Taginabu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machchhegaun</td>
<td>Bosan</td>
<td>Pharping</td>
<td>Balambu</td>
</tr>
<tr>
<td>Tistung-palung</td>
<td>Kirtipur</td>
<td>Chobhar</td>
<td>Kisipidi.</td>
</tr>
</tbody>
</table>

(The same order was sent on the same date to Kotku, Sunaguth, Bungmati, Tudikhel, Bode, Katike, Khokana, Itachi, Harisiddhi, Thaiba, Lele and other villages also).

**Document- 25**

Management of a temple, September 1805

(RRS, 1972 p. 80)

From King Girban, on *Bhadra Sudi 7* 1862

We have received reports that the management of the Machchhendranath temple is not being conducted smoothly, and its property is not being looked after properly, because a new person has been appointed as *biset*. We therefore reinstate the following persons as *biset*, (whose families have been functioning is this capacity) from ancient times: Ratan Budha of Ilalakhu and Shiva Narsing of Kwalakhu. Together with Bhaju Narsing Tusu of Taudhyal as *ditha*, we hereby appoint these three persons as care taker (*chitaidar*) of (the temple of) Machchhendranath and its treasury, responsible for the management of the homesteads, *khet* lands, forests, *bari* lands, villages, etc. owned by it.

Do not covet the grains, ornaments and other property (of the temple). In case you do so, or conceal or misappropriate it, may the curse of Shree Machchhendranath fall on you. Appropriate the customary emoluments (*khangi*) allocated for all the three person, which are as follows: 12 muris of rice, 25 muris of paddy and 12 muris of wheat. Have 12 assistants (*kacha-biset*) remain in constant attendance and give them customary emoluments, which are as follows: 24 muris of rice, 25 muris of paddy and 12 muris of wheat. Retain those who remain in constant attendance and dismiss those who neglect their duties. *Bhardars*, *amalidars* and revenue collectors (*rakamidar*) shall not create any trouble on lands belonging to the god. Do not have *khet* lands cultivated through the use of force, appropriate crops. If force is used, report the matter to us.

Perform religious functions at the temple according to the customary rites. Deposit surplus revenue to the treasury. Your life and property shall be forfeited or you may be impaled, if the revenues of the temple are defalcated or any greed or sin committed in this regard. Understand this, preserve your integrity (*dharma*), perform functions at the temple and wish victory to us. Enjoy (your positions) from generation to generation. Any person who violates these regulations (*thiti*) shall incur the five great sins (*panchamahapataka*).
Document- 26

Supply of cane for jholanga, June 1807
(RRS 1988, p. 150)

On Asad sudi 10, 1864, a royal order was issued for the supply of cane on jhara basis from all inhabitants of Tanahu for the construction of jholangas at Borlang-ghat, as well as on the Chepe and Marsyangdi rivers. They were ordered to deliver the cane at Gorkha-besi before the 10th day of Shrawan. Households who had sent men to Kangra, as well as Kagati-hulaki households, were granted exemption from this obligation.

Document- 27

Forest protection in Harmi, October 1808
(RRS 1986, p. 4)

We have received reports that trees adjoining channels which irrigate rice-fields in Harmi have been cut, with the result that the channel has been washed away and the rice-fields are going out of cultivation. We hereby appoint (Katik badi 1, 1865) daroga Damodar Jaisi to supervise the protection of forests near the irrigation channel.

Document- 28

Supply of firewood from Patan, April 1810
(RRS 1982, p. 55)

King Ran Bahadur Shah had enrolled 26 households in the following villages for the supply of firewood to the Dilasal-Baithak (?) and granted them exemption from unpaid labour obligations, saunefagu, ghargani, and other miscellaneous payments (udhaune, padhauni). These arrangements were reconfirmed by royal order on Baishakh Sudi 5, 1867. The names of the villages, and the number of households enrolled for the supply of firewood in each, are as follows:-

<table>
<thead>
<tr>
<th>Village</th>
<th>No. of households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanagaun</td>
<td>9</td>
</tr>
<tr>
<td>Bode</td>
<td>6</td>
</tr>
<tr>
<td>Dharmapur</td>
<td>6</td>
</tr>
<tr>
<td>Harisiddhi</td>
<td>5</td>
</tr>
</tbody>
</table>

Document- 29

Supply of charcoal from Thecho
(RRS 1982, p. 55)

On Katik Sudi 8, 1869 (October 1812), the inhabitants of Techo village in Patan were granted similar concessions in consideration of the supply of one dharni of charcoal daily from each household to the Kathmandu munitions Factory.
Forest protection in Kathmandu valley.
(RRS 1983, p. 92)

In the Vikrama year 1872 (A.D. 1815), a ban had been imposed on land reclamation, clearing, slash-burning, manufacture of charcoal for purposes other than meeting the requirements of the Munitions Factory, and cutting of timber in forests areas in and around Kathmandu Valley, including, Kahule, Manichur, Sindhubhanjyang, Mahadev-pokhari, Ranikot, Phulchoki, Champadevi, Chandagiri, Panauti, Banepa, Nala, Chankot, Dhulikhel, Byahabarkhola, Dhumkharka, Hattiban and Sisneri.

However, timber was cut, and lands were reclaimed, in these areas from time to time under orders issued by different authorities in contravention of the ban. The forest guards (chaukidar, chaprasi) reported the matter to the government through the sardar of the four adalats.

Growing forests in Mahabharat region, December, 1816
(RRS 1981, p. 99)

Royal order (Paush sudi 3, 1873) to subedar Bhimsen Baniya: "Do not let herds of cows and buffaloes be taken through the gates of the Pauwa fort in Sindhuli, as such a practice will damage the road. However, traders shall be allowed to bring in buffaloes through that road.

Remove all settlement from the area south of the Mahabharat mountains, north of the Chure hills, west of Kawala and east of Pipaldanda. Close all tracks in that area and let it grow as a forest."

On the same date, people employed in checkposts maintained along the Mahabharat range were ordered to help, subedar Bhimsen Baniya implement the arrangements mentioned above. The order added, "Close all tracks in the area and render them unusable by planting bamboo, cane and thorny bushes as before."

Forest in Sindhuli-Makawanpur region.
(RRS 1980, p. 117)

On Aswin sudi 4, 1874 (September, 1817), the inhabitants of the Sindhuli-Makawanpur region, situated west of the Kamala river, north of the Churia hills, east of Chitawan, and south of the Mahabharat mountains were informed that it had been decided to develop forests in that region. They were, therefore, ordered to shift their settlements to other areas. Any person who possessed no lands elsewhere for the purpose was asked to apply to the government for an allotment.
Document- 33
Forest protection in Kathmandu valley
(RRS, 1970, p. 171)

In 1879 Samvat (1822), an order was promulgated prohibiting reclamation, manufacture of charcoal for non-military purpose and destruction of forests around Kathmandu Valley, including Kahule, Kakani, Manichud, Sindhu-bhanjyang, Mahdev-pokhari, Raniban, Phulchoki, Champadevi, Chandagiri, Panauti, Banepa, Nala, Chaukot, Dhulikhel, Bihabar, Dhumkharka, Hattiban and Sisneri. The boundaries of these forests were demarcated and forest guards were appointed.

Subsequently, several persons received royal grants to clear and reclaim lands in these forests. All such grants were withdrawn on Baishakh Sudi 11, 1890 (May 1833) and arrangements were made for the appointment of forest guards in adequate numbers. Village headmen and other local functionaries were made responsible for apprehending and handing them over to the authorities in Kathmandu. The government directed that timber should be cut in these forests only through the special permission of Prime Minister Bhimsen Thapa.

Document- 34
Regulation for Chisapani-gadhi, August, 1824
(RRS 1980, p. 117)

Section 7: "Do not allow any person to clear the new forests in the Kulekhani-Hetauda area, even if he wants to do so on his own birta lands. Any person who acts in contravention of this order shall be arrested and produced before us."

Document- 35
Checkposts in Mahabharat region.
(RRS 1982, p. 79)

Traditionally, the government maintained a line of checkposts along the Mahabharat range. These checkposts were manned by local households. Their functions, duties, and privileges were prescribed as follows:-

1. To maintain checkposts (chauki) and close tracks.
2. To install pikes, snares, etc in the area assigned to each household, plant cane and thorny bushes, and dig ditches, so as to make the track unusable.
3. To prevent the clearing of forests specified after surveys conducted in 1872 Vikrama (A.D. 1815).

On Marga Sudi 12, 1883 (November 1826), royal orders were issued specifying the number of households assigned to each checkpost, because the number originally assigned had dwindled in some cases. (542 households were assigned in checkposts located in 34 villages)
1. The following royal order was issued in the names of specified Brahmins of Sisneri Village in Lalitpur on Chaitra Sudi 15, 1884 (March 1828):

"Protect forests carefully on your birta lands in Majuwa as well as on raiker lands in Patale in order to conserve water for irrigating sera (Crown) lands in Lubhu as well as for protecting black pheasants (kalij) and black partridges (tutra). Do not let black pheasants be hunted with dogs, hawks, snares, etc. Any person who kills the hen birds shall be punished with a fine of ten rupees; the fine shall amount to five rupees if he kills the chicks, and 2.5 rupees if he destroys the eggs. Similarly, a fine of ten rupees shall be imposed on any person who cuts firewood. Protect the forest with full care."

The order was addressed to Dinakar Padhya, Ranganath Padhya, Shiromani Padhya, Brajmohan Padhya, Ekasurya Padhya, Shiva Phadya, Harivamsha Padhya, Nilakantha Padhya, Govinda Padhya, Ramu Padhya, Prayag Datta Padhya, Rahunath Padhya, Biju Padhya, Ganapat Padhya, Chhabu Padhya, Shrilal Padhya, and other members of the Poudyal clan.

2. Another royal order issued on the same day in their names permitted them to cultivate their jafati lands (i.e. birta lands which had been made taxable in A.D. 1806 and protect forests in Sisneri on the following terms and conditions.

i. Pay rents on kut or adhiya basis as the case may be to your landlords, and also a share of the wheat crops and the ghiukhani tax and the chardam fee.

ii. Provide loans to your landlords, if so asked up to the value of rents.

iii. Jagirdar-landlords shall not evict Paudyal Brahmins from their jafati rice-land holdings.

iv. Protect the Majhuwa-patale forest carefully in order to conserve water for irrigating sera lands in Lubhu.

v. Do not let anyone kill black pheasants and black partridges, or cut trees.

vi. Apportion the rice-lands among yourselves for cultivation.

Vreshadhwaj Thapa of Bhadgaun submitted the following petition to the palace: "A royal order had been issued previously for the protection of forests at Tindol in Bhadgaun. The order is now lost, hence the forest is being indiscriminately destroyed."

A royal order was therefore issued on Marga sudi 3, 1886, (November, 1829), appointing Vrishadhwaj Thapa as caretaker of the forests in the area (boundaries specified) north of Maligaun. The order
authorized him to protect the forest, seize the weapons and tools of poachers, and inflict appropriate punishment on them.

Document- 38
Pasture lands in Panchgaun Salyan, May 1830
(RRS 1975, p. 25)

Lands being used for pasturage by the inhabitants of Panchgaun were granted to Indu Kanwar by local authorities in Salyan. The inhabitants complained, and the grant was cancelled (Jestha sudi 15, 1887).

Document- 39
Supply of charcoal, Shrawan sudi 8, 1887 (July, 1830)
(RRS 1975, p. 48)

Three villages in the Dhulikhel area, and one village in Bisankhu area, had been granted exemption from the supply of charcoal to the government munition factory in consideration of the services that they rendered to the local amali. The exemption has been withdrawn.

Document- 40
Forest protection in Kafaldanda and other areas,
(RRS 1975, p. 177)

On Paush badi 11, 1887 (December, 1830). the jamadars and other officials of the Gurubux Company were directed not to permit the inhabitants of Kafaldanda and other areas (in Nuwakot district) to reclaim forest lands and use tracks that had been closed previously. They were also directed not to permit the reclamation of lands situated along main track.

Document- 41
Timber export to India, Magh sudi 3, 1887 (January, 1831)
(RRS 1976, p. 159)

Subba Kulananda Jha had been granted a contract for the collection of customs duties, including duties on timber exports, in the Rampur, Pihar, and Mahisoth Pargannas of Saptari district. The value of the contract, which was valid for five years, amounted to Rs 10,501.

At that time, some British traders had been permitted to cut timber and export it to India. However, they discontinued these operations. The amount of the contract was, therefore, reduced by Rs 4,501.

Document- 42
Checkpost in Ambas Salyan, Magh sudi 4, 1887 (January, 1831)
(RRS 1976, p. 160)

Royal order to Bhuminanda Upadhyaya, mukhiya of Matt in Salyan district: "... The families who maintain watch at these checkposts may use cultivated lands in those areas but shall not clear additional
forest lands. We hereby exempt them from other forced labour (jhora, beth, begar) obligations."

Document- 43

On Katik sudi 14,1888 (October, 1831) Shobhananda Banda was granted authority to protect forests in the region situated west of the Chepe river and east of the Kali (Gandaki) river, north of Gaighat and south of the Tingaun hills. He had earlier submitted a petition to the palace complaining that sal and sallo trees were being cut indiscriminately in Tanahu, Lamjung, and Kaski, so that timber might become scarce for meeting government needs and for the construction of roadside shelters, m fords and forts. A royal order issued in the name of Shobhananda Banda warned that any person who cut trees without permission would be severely punished.

Document- 44
Forest protection in Bhirkot. (RRS 1982, p. 152)

On Paush badi 3,1889 (December 1832), Shakti Padhya was granted authority to protect the Kharibote forest (boundaries specified) at Khilung in Bhirkot, as well as a bamboo grove at Phusremata. Timber and bamboo from that forest were allowed to be cut only for the construction of embankments on dams and irrigation channels meant for irrigating jagir lands of the army, as well as for fords on streams and rivers.

Document- 45
Forest protection in Sarangkot, January 1834) (RRS 1982, p. 152)

The Saunepani forest in Kaski district had been reserved for the supply of timber to construct embankments along the Pardi canal. A chitaidar (caretaker) was appointed for that forest, with authority to cut timber for this purpose and impose a fine of five rupees in any person who did so forcibly for his personal use. The chitaidar was paid remuneration in the form of five muris of paddy every year from rents in lands assigned for that purpose.

Document- 46
Instruction to chiefs of administrative districts (RRS, 1986 p. 180)

The following instructions were sent under the royal seal to the chiefs of different administrative districts on Thursday, Chaitra Badi 8, 1892 (March 1836):

3. Roadside trees, as well as those near temples, rest-houses, and sources of water shall not be cut in any circumstances.
The orders was sent to the chiefs of the following administrative districts:


Document- 47

Forest protection, *Asad badi* 14, 1894 (June, 1837)
(RRS 1978, p. 94)

A public notification was made prohibiting the cutting of *sal* timber in Tahdrang (Gorkha), Jita (Lamjung), Thansing (Nuwakot) etc except for government requirements and construction of bridges (*targhat*).

Document- 48

Forest protection in Bhirkot, *Magh badi* 11, 1894 (January, 1838)
(RRS 1982, p. 152-3)

Ranbir Khatri, Bahadur Srinaru and Ravidatta Rana of Bhirkot submitted the following petition to the royal palace.

"At Jharkhang-khola, Sima-khola, Chyangra-khola, and other (specified) places in Bhirkot, forests had been protected formerly for the supply of bows, quivers, etc.to the government every year, and rice fields too were under cultivation. These days trees are being cut indiscriminately, with the result that bamboo plants have died, and rice fields have been damaged by landslides. Moreover, sources of water have dried up, no timber is available for the construction of dams and irrigation channels, and the supply of bows, quivers etc. to the government has stopped."

A royal order was then issued granting authority to the petitioners to protect the forests.

Document- 49

Ban on *birta* grants, *Falgun Badi* 4, 1895 (March, 1839)
(RRS, 1979 p. 122)

Royal order to the *bhardars* of the *Sadar-dafdarkhana*: For a ten year period from Sunday, *Falgun Badi* 5, 1895 (March 1839), lands shall not be actually allotted to anybody who may receive a *birta* grant. Instead, payment shall be made in cash in consideration of ritual *birta* grants at the rate of *mohar* Rs. 500 in the case of the Royal Priest, and *paisa* Rs 500 in the case of other recipients, for each 100 muris (i.e; *khet*).

Document- 50

Forest protection in Gorkha, *Falgun badi* 13, 1895 (March, 1839)
(RRS 1970, p. 171)

At one place in Liglig, Gorkha district, peasants cultivating *jagir* lands complained that deforestation had led to the drying up of sources
of water and thus rendered their lands uncultivatable. The government appointed two local persons as caretakers of the forests. Arrangements were made to cut timber for the construction of palaces, bridges and roadside shelters, as well as for the requirements of the local people, only through their permission.

**Document- 51**

Forest protection in Dolakha,
(RRS 1983, p. 94)

Order to the amali, thari, mukhiya, and mijhar of Pakarbas (Dolakha): "The local people have submitted a complaint through the amali to the effect that people from outside that area have reclaimed forest lands there and destroyed forests, and that, consequently, not even khar grass and leaves, or timber and roofing materials for huts and cottages, are now available. We hereby order that, in the future:

1. No person shall be allowed to cut sal, sallo, and bhorla trees in new forests.
2. Kipat-owners and birta-owners shall protect forests on their kipat and birta lands. They shall not set fire to such forests, or allow any person to clear new forests.
3. The sanghus (beams placed across streams) on the Bhatauli Khola shall be made every year through the amali.
4. Any person who acts in contravention of this order shall be severely punished.

**Document- 52**

Forest protected in Dhoksila, Sindhuli
(RRS 1983, p. 94)

The following order was issued to Jasram Thapa and Kashi Padhya Baral on Paush Sudi 5, 1899 (December 1842):

1. Do not allow any person to cut green trees or reclaim lands in the forest area situated east of Dhoksila-khola, west of the Kahule-khola, north of the Kyaurini-khola in Thalagaun, and south of Danduwagaun in Bungnam area (of Sindhuli).
2. Do not allow any person to cut trees on the borders of rice fields, or along paths, and near sources of water.
3. Any person who acts in contravention of this order shall be produced before the amal and punished with a fine.
4. In case you allow any person to cut trees in the protected forest out of special favour, and do not protect the forest carefully, you too shall be punished with fines.

**Document- 53**

Forest protection in Chisankhu.
(RRS 1983, p. 93)

Rama Chandra Khatiwada owned forest lands under birta tenure at Jarayotar in the Bungnam area (of Chisankhu in the eastern hill region). On Paush Sudi 5, 1899 (December 1842), the following
regulations were issued for the protection of that forest:

1. No person shall cut green trees or grass, reclaim lands, or burn slash in that forest, located east of Agrichaur Danda.
2. In case any person needs (timber or other forest product) for any purpose, he shall obtain permission from the birta owner.
3. Any person who acts in contravention of these regulations shall be punished.

**Document- 54**

Forest protection in Phulping, Sindhupalchok

(RRS 1983, p. 95)

Raghubir Thapa submitted the following petition to Kathmandu:

"The forest at Kotthok village in the Phulping area (of Sindhupalchok district) had been protected from former times. Since the year 1894 (A.D.1837), people have been poaching timber from that forest. In case the forest is destroyed, 100 or 200 households in the village will be forced to quit."

The following order was then issued on *Magh sudi* 4, 1899 (January, 1843):

"No person shall cut timber from that forest. In case any one requires timber for any purpose, he shall obtain permission from Raghubir Thapa to cut it."

**Document- 55**

Forest protection in Bode, Bhadgaun

(RRS 1983, p. 95)

The *chitaidars* (caretakers) of forests owned by the temples of *Shree* Nilavarahi and *Shree* Mahalaxmi in the Bode area (of Bhadgaun) complained that timber was being cut in those forests in contravention of existing regulations. They pointed out that the *chitaidars* and *mahanes* who had been appointed as forest guards had placed under the obligation of working for the local *amal* and other authorities, with the result that they had become unable to protect the forests.

An order for the protection of these forests had originally been issued in the *Vikram* year 1886 (A.D.1839).

On *Chaitra badi* 11, 1899 (March 1843) an order was issued appointing the following seven persons as *chitaidars* of these forests:

Bijar Sim Budha, Bhim Chandra Budha, Simhabir Lakhya, Vishnu Budha, Bhajudhana Lakhya, Bhajubir Has and Chandrabir Khasu. These persons were granted exemption from all forms of unpaid labour obligations (*jhora, beth, begar*). The order prohibited the cutting of timber or grass in those forests in contravention of existing regulations.
Document- 56
Forest protection in Kabhrepalanchok, Chaitra badi 11, 1899 (March, 1843)
(RRS 1983, p. 95-6)

Order to the amali, thari and dware of Mahadeva Pokhari, Basanta Dahal, Hari Bhajgain, Gaju Ghimire, and Mahendra Khatri.

"A royal order has been issued previously to Vishnu Simha Thapa to plant trees on a plot of land known as Hilekharka as well as to protect the Patal forest around the local kot. Complaints have been received that Vishnu Simha Thapa has prevented the local people from grazing their cattle and using paths through that place, and stopped rent and other payments to jagirdar, and that the Patal forest has always been protected by the officials of the kot themselves."

"The order issued previously appointing Vishnu Sinha Thapa as caretaker of the patal forest of kot is here by cancelled. The Bhote subjects of Hilegaun shall be allowed to use their lands as before. Customary payments shall be made, and the forest protected as usual"

Document- 57
Forest protection in Sindhupalchok, March 1843
(RRS 1970, p. 172)

At Pokhre village in Sipa, Sindhupalchok district, a birta-owner complained on Chaitra Badi 11, 1899 (March 1843) that forests on his birta lands were being indiscriminately destroyed by the local people, so that the village was being ruined and jagir lands were being rendered uncultivable. The government thereupon issued an order prohibiting the cutting of green timber and land reclamation in the forest. It directed, in addition, that timber should be cut only through the permission of the birta-owner in such a manner that the forest was not destroyed. The birta-owner himself was appointed caretaker of the forest, with powers to apprehend offenders and hand them over to the authorities.

Document- 58
Pasturage facilities in forest in Garhun.
(RRS 1986, p. 192)

The Newars of Balam Bhanjyang in Garhun occupied lands endowed as guthi for financing the repair and maintenance of rest-house (pauwa). They complained to Kathmandu that the village functionaries were denying them pasturage facilities in the local forests. An order signed by prime Minister and Commander-in-Chief Mathabar Sinha Thapa was issued on Thursday, Chaitra Sudi 5, 1901 (March, 1845) directing the amali, thari, mukhiya and other people of Garandi and Balam not to deny such facilities to the Newars if these had been customarily used. The order summoned both parties to Kathmandu for a hearing if the facts were different.
Prime Minister and Commander in Chief Mathbar Sinha Thapa’s order to the Bhote-praja inhabitants of the Tribeni-phedi area of Bisankhu, other than those under the jurisdiction of Shree Maiya Saheb (Princess).

"You are hereby ordered to supply charcoal to the Ranipokhari Magazine every day according to the royal order issued previously. If you do not do so, and there is a shortage of charcoal, you shall be held liable.

Prime minister and Commander in Chief Mathabar Sinha Thapa’s order to the inhabitants of Bhumlu, Thokarpa, and Yamuna:

"His Majesty is constructing a Shiva temple at Pokhaldyang (in Kathmandu). For this purpose, timber has been cut from the Rithe forest. Transport the timber up to Simle Ghat as ordered by hawaldar Sarup Gharti.

Prime Minister and Commander in Chief Mathbar Simha Thapa’s order to the mijhar, gaurung, and chaukidars of Okhargaun village in Sikarkot (Makawanpur district);

"Porters (khalasi, pipa) and jhara labourers will pass through that checkpost (chauki) on their way to Bhaise-khani and Bhainse-dobhan to transport timber for a Shiva temple being constructed by His Majesty. Do not stop them, but let not criminals and fugitives pass through that checkpost disguised as porters."

The inhabitants of Balagaun in the Machhegaun area (of Lalitpur district) submitted the following complaint:

"Every year, ijaradars cut trees in the forest of Balagaun, so that the forest is being destroyed and irrigation channels are drying up. Consequently, we are not able to sow our fields in time. Because fields are not being sown in time, we are unable to raise the quantity of grains needed for the payments of kut rents. Even then, our landlords (talsing) collect the stipulated kut rents from us. We are thus being forced to sell..."
our children (to pay kut rents).

The government then issued an order granting authority to kapardar Kirtidhwaj Pande to collect rents on jagir lands in Balagun on thek basis in the following manner:

"From Baishakh Badi 1, 1903 (April 1846), pay a total amount of Rs 78-4 (including of Rs 65-4 assessed as tax during the settlement of 1894 Vikram, and Rs 13 as asmani payments) to the concerned jagirdar-amali. Appoint mahanes to protect the forest, water-spout, and roadside shelter (pati) at Balagaun. Do not impress unpaid labour (jhara, beth, begar) from them for other purposes. Make available dry or fallen timber to beggars, mendicants, etc., as well as for the purposes mentioned in the stone-inscription. Punish poachers with fines.

**Document- 63**

Forest protection in Kathmandu valley
(RRS 1983, p. 93)

The following regulations were issued on Magh Badi 9, 1902 (January, 1846):

1. No person shall cut timber, reclaim lands, burn slash, clear forests or manufacture charcoal for purposes other than meeting the requirements of the Munitions Factory.
2. Even for meeting the requirements of the Munitions Factory, wood shall not be burnt in pits for making charcoal. Charcoal for this purpose shall be made in forests on the other side of the watershed.
3. The Itachapli-adalat will issue permits for timber required for our palaces, or granted by us to any one, under the permission of the Mukhtiyar. The chaprasis of forest checkposts shall allow timber to be cut against such permits in their presence.
4. No one shall cut timber through permits issued by any authority other than the Itachapli-adalat.
5. In case any person poaches timber, or does so fraudulently, thereby destroying forests, or in case chaprasis allow any person to do so, the guilty person shall be produced before the adalat and punished severely.

**Document- 64**

Forest protection in Garhun.
(RRS 1986, 177-8)

Jageshwar Pande’s petition: "Forests adjoining the Madi-khola river in Garhun has been protected from former times. Now timber, bamboo, and cane are being cut from those forests and the land is being cleared for cultivation. As a result, landslides are damaging dams and irrigation channels on rice-fields belonging to the army."

The following order was then issued in the name of Jageshwar Pande on Saturday, Marga Sudi, 3, 1903 (November, 1846): "The forests shall be protected as usual. All lands brought into cultivation in that area after the Vikram year 1894 shall be allowed to revert to forest. No one shall be allowed to cut green trees, bamboo, or cane there. Timber
may be cut only with your permission for meeting the requirements of the local palace (kot) and Dashain ceremonies, as well as for constructing dams and irrigation channels, embankment, and houses. Any person who cuts timber in contravention of this order shall be produced before the amal and punished. You are hereby granted authority to protect the forests according to those arrangement.

Document-65
Forest protection in Dolakha, Magh sudi 5, 1903 (January, 1846)

The amalis, tharis, mukhiyas, birta-owners, guthiyars, kipat-owners, chhap-owners, mijhars, naikes, gaurungs, miners (khaniwars), and other people (dhakre) in Simras, Phasku, Katakute, Chhahare, Maga, Surke, Bonch, Pheda, Dudhpokhari, Nighare, Alampur, Dathe, Bhedpu, and other areas (in Dolakha district) submitted the following petition to Kathmandu:

"Because of the indiscriminate extraction of the malingo in the Sailung area, the work of both the government and the people had been obstructed. These days the plants have started growing again. However, people take away the young shoots for sale, or cut the plants to make wicker goods for sale, because there are no restrictions. Virgin forests have been cleared for agriculture, with the result that sources of water have dried up at many places, and irrigation channels constructed on the rice lands assigned to military personnel and others have been damaged. In case a royal charter(thiti-bande) is granted, we shall protect forests in this area."

The following royal order was then issued.

"No person shall be allowed to take away shoots or cut the malingo plant for the next nine years in the Selung area. No new lands shall be cleared for cultivation in the forest situated beyond the village, although lands previously reclaimed may continue to be cultivated. Miners should cut only such wood as is suitable for the manufacture of charcoal. The concerned tenants shall collectively repair and maintain irrigation channels on rice lands assigned to military personnel. Trees adjoining dams, irrigation channels, sources of waters, and reservoirs shall not be cut."

The royal order added, "Do not set up homesteads on or bring into cultivation main paths at Chaitaghat and elsewhere, as well as other paths, pasture lands, water springs, and other lands affecting the easement rights of others. If homesteads have been set up on such lands, shift them elsewhere and plant trees there. Obtain permits from the local amali for timber required for the construction of houses, cottages, fords and road-side shelters."

The previous royal order on this subject was cancelled, and Bishnu Kanta Upadhyaya Koirala was granted authority to protect forests in the Selung area of Dolakha district. He was empowered to collect fines and
penalties from people who acted in contravention of these regulations and remit the income to the Sadar-dafdarkhana in Kathmandu.

Document- 66

–Ban on clearing forest for agriculture, Dolakha, January 1847
(RRS 1983, p. 28)

The allotment order stated: "Tenants shall make these payments to their jagirdar-landlords and also provide them with loans not exceeding the value of the rents if so asked. Tenants shall repair damaged irrigation channels and construct embankment in rice-fields through their own labour and resources. They shall put manure in the fields, and not cut trees on the borders. They shall also not clear forests for agricultural purposes."

Document- 67

Forest protection in Gorkha, Magh badi 9, 1903 (January, 1847)
(RRS 1986, p. 177)

Royal order to the subba and thargars of Gorkha:"You have reported that a forest adjoining the sanghu (ford) on the Daraundi river in Gorkha has been cleared and burnt for purposes of cultivation, with the result that the rest-house (near the sanghu) has been washed away and the sanghu too is about to collapse.

"We therefore hereby order that the forest tracts mentioned below be protected in the future:-

(1) Forest bounded by the Alainchi khet in the east, the Deurali hill in the south, the Daraundi river in the west, and the fields at the foot of the hills in the north.
(2) Forest bounded by the Bhusya-khola in the east, the Khahare field in the south, the Khahare-khola in the west, and the Thado-kholsi in the north.
(3) Forests adjoining irrigation channels in the Ghalala-Phant area.

"Roadside trees, as well as those located near sources of water, and fruit trees, shall not be cut. Do not let anyone cut green trees, set fire to the forest cover, and clear the land for cultivation. Allow timber required for construction of palaces and sanghus, for repair of dams and irrigation channels on sera lands, and for building the huts and houses of the people through common consent. No one shall cut any timber without such permission. Any person who clears forests or sets them on fire shall be punished according to the nature of his offense."

Document- 68

A lac plantation in Pallokirant.
(RRS 1984, p. 131)

Subba Harka Bali and subba Sukharaj owned a catechu [Acacia catechu] plantation in the Nibukhola area of Pallokirant, from which they produced lac. The plantation had been started by their father. Because the local people trespassed on the plantation and felled the catechu trees, the two subbas submitted a petition to Kathmandu. A
royal order reconfirming their title to the plantation was, therefore, issued on the Monday, Jestha Badi 3,1904 (May 1847).

The subbas paid a thek tax on the plantation, and the revenue had been assigned as jagir to the Srinath Kampa and the Srijung Paltan.

Note; It is obvious that the two subbas owned the plantation under Kipat tenure. Such property rights in land were virtually unknown in state owned raikar in the middle of the nineteenth century, particularly in forests and plantation. (M.C. Regmi)

Document- 69
Forest protection in Harihar cave in Kaski, May, 1849.  
(RRS 1985, p. 72)

The Harihar Cave is located at Bhalamkhor-danda near Pokhara. Image on Shiva and Hanuman have been installed there. In former times, the area around the cave was covered by dense forest.

On Sunday, Baishakh Sudi 7, 1906 (May 1849), Prime Minister Jung Bahadur issued the following order in the name of Goswami Amara Giri:-

"You have reported that the forest around the Bhalam Cave in Kaski district is being indiscriminately destroyed these days. We therefore grant you authority to conserve the forest and hereby issue the following orders:

1. Trees shall not be cut in the forest, nor shall the forest be cleared or burnt for purposes of agricultural cultivation.
2. The wood of the forest shall not be used for making charcoal.
3. Hunting in the forest is prohibited. No one shall kill any deer, boar, serow (thar), goral, porcupine, hare, black pheasant (kalij), black partridge (titra), chuk or patridge (chyakhura), and other birds and animals.
4. In case any person disobeys these orders and cuts trees; in the protected forest, or kills birds and animals, he shall be arrested, produced before the village court (amali), and punished according to the nature of his offense.
5. "The amali, dware, thari, mukhiya, and other respectable persons of the village shall also look after the forest."

Document- 70
Forest protection in Parbat.  
(RRS 1986, p. 178)

Petition of Navanidhi Pandit of Balewa, Parbat district: "Forest located above the confluence of the Dhawa Khola in the Balewa area of Parbat, as well as khar grass on the Antari hills, had been conserved according to the collective decision of the local people. The villager used to cut (timber and khar) grass for their needs in a regulated manner. These days, however, these trees are being felled indiscriminately, and khar grass is cut even before it is mature, because there are no official regulations. As a result, the villagers have not been able to roof their houses, or procure building materials (danda, bhata), Indeed, timber is
not available even to repair dams and irrigation channels on the lands of the army, and fields remain uncultivated. Our villages will be depopulated if necessary official regulation are not promulgated."

The following order was issued on this petition from the Sadar-dafdarkhana on Friday, Baishakh Sudi 7,1907 (April 1850):

"You are hereby granted authority to protect the forest and the hillside tract (bhir) (mentioned in the petition). Do not let any one cut timber or khar grass indiscriminately, or to clear the land for cultivation. Materials needed to repair dams and irrigation channels on the lands of the army, and for building and roofing houses, shall be procured through the collective decision of the villagers. In case anyone cuts trees, he shall be taken to the local amal and punished. You will be punished by the amal if you procure such materials for your own use without consulting other villagers on the plea that you are the caretaker."

Document- 71
Forest protection in Rising, Tanahun
(RRS 1986, p. 179)

Petition of Gajabir Ale of Rising: "I had constructed a rest-house (dharmashala-thanti) on the hill leading to the village of Khudi in Rising. These days trees, bamboo, nigalo, khar, etc. around that rest house are being cut indiscriminately. How then can I make the roof? It has now become difficult for travellers to take shelter there."

Gajabir Ale, therefore, requested permission to use the trees, bamboo, nigalo, cane, etc. on the banks of the Chapadi-khola, and the khar grass on a tract of Suwaro (hillside) land known as Betauti, exclusively for the rest-house. He also requested that he be granted authority to protect them.

An order, addressed to the thekdar, mukhiya and villagers of Khudi village, was issued on Tuesday, Baishakh Sudi 10, 1907 (April, 1850), granting Gajabir Ale's request.

Document- 72
Forest protection in Syangja
(RRS 1986, p. 179)

Twelve tharis of the Kristi area of (Syangja) Nuwakot submitted the following petition to Kathmandu. Their names were Bagbir Thapa, Trivuban Thapa, Maniram Chulagain, Jayamangal Padhya, Tulasiram Padhya, Abir Thapa, Karabir Khatri, Biraj Gurung, Tirtha Gurung, Kumbha Singh Gurung, Kalu Thapa and Jayabhadra Banstola

"An order had been issued during the time of General Bhimsen Thapa for the protection of forests in the Kristi area bounded by Khalsya in the east Syalhdunga in the west, Bhir-suwaro and Bhaisyadi in the north, and the track through Bholoyadanda in the south. These forests had accordingly been protected."
People subsequently acted in contravention of that order, with the result that the forest were destroyed. A royal order was, therefore, issued in the Vikrama year 1904 (1847 A.D.). However, that order did not contain a full list of names, nor did it indicate the boundaries accurately. Consequently, the forests are again being destroyed.

This year, a landslide occurred in that area, and buried large areas of rice fields belonging to the army. The supports of the local fort (kot-gadhi) are also about to collapse."

The petitioners, therefore, prayed that a fresh order be issued authorising them to protect the forests. The order was accordingly issued on Sunday, Marga Sudi 5, 1907 (November, 1850).

Document- 73
Land allotment in Dolakha, January 1851
(RRS 1981, p. 190-1)

Meghu Karki and Mahabir Karki were cultivating 81 muris of rice lands in Simras (Dolakha), which had been assigned as the khangi of Kaji. They prayed that a formal document reconfirming their allotment be issued, so that no other person might be able to claim any right to the lands.

Their request was granted...

Repair dams and irrigation channels through your own labour if these are damaged. Put manure on land. Do not cut trees on the boarders of the fields."

Document- 74
Forest protection on Bhirkot
(RRS 1986, p. 180)

Ranabir Rokaya and other inhabitants of Khilung in Bhirkot submitted the following petition to Kathmandu: "Sal and sallo trees, as well as bamboo, nigalo, khar and babiyo in the Chhagodi, Trishuli, Bhima-odar, and Deupuja area of Khilung had been protected since the times of the Raja of Bhirkot. The local people used to procure timber and other products from there according to need for repairing dams and irrigation channels on lands belonging to the army, as well as for their domestic purposes. These days, however, both the local villagers and outsiders do so indiscriminately, so that supplies are nearing exhaustion. It has, consequently, not been possible to repair dams and irrigation channels on lands belonging to the army, and large areas have been left uncultivated. It has also not been possible to meet domestic needs."

An order was accordingly issued on Saturday, Magh 7, 1907 (January, 1851) authorising the petitioners to function as caretakers and protect the forest. The order added, "Necessary supplies of timber and other products may be obtained only with the permission of the caretaker (chitaidar) and the amali. Anyone who forcibly procures supplies, including the chitaidar, shall be punished by the amal."
Document- 75

Supply of timber to munition factory
(RRS 1981, p. 31)

On Paush Badi 1, 1909 (December 1852), an order had been issued to local authorities at Narjatar in Nuwakot to allot about 884 muris of rice lands to 41 Newar households in the village on the following conditions:-

1. 48 pieces of timber should be supplied for the manufacture of rifles to the Jangi-megjin (munitions factory) in Kathmandu every year.
2. Rents on the rice land allotments mentioned above should be paid regularly to the concerned jagirdars.

These Newars were employed as porters during the Nepal-Tibet war in 1911 Vikram (A.D. 1854) for the transportation of military supplies.

Document- 76

Kathmahal regulations for naya-muluk

From a list of the regulations of the government of Nepal A.D. 1846-68 (RRS, 1982, p. 104), it can be concluded that kathmahals in Nayamuluk were created on Katik 10, 1917 (October, 1860) and in other area in the west of Narayani river by Katik 15, 1917 (October, 1860), However regulations relating to kathmahals in the eastern Tarai were enacted after a year i.e. Marga 6, 1918 (November,1861).

Document- 77

The wax and paper monopoly.
(RRS 1981, p. 169)

On Jestha sudi 12, 1919 (May 1862), the following public notification was issued to village headmen and producers of wax and paper in the Syartan, Satthar and Warpak areas of Gorkha.

Under the wax monopoly, the monopolist is under obligation to:

(a) Supply wax of pure quality (galawat) every day in the stipulated quantity,
(b) Supply additional quantities when required at the rate of Rs 2.5 per dharni.

Similarly under the paper monopoly, the monopolist is under obligation to supply writing paper to the palace at the rate of one anna per dhep (20 sheets) in the required quantities.

We have now received reports that jagirdars and birta-owners do not let the monopolists procure wax and paper produced in the areas under their jurisdiction, and make their own arrangements for the sale of those commodities.

Jagirdars and birta owners all over the kingdom are, therefore, directed to let monopolists procure wax and paper produced in the areas under their jurisdiction at local prices as usual. They shall be punished with fines if they make their own arrangements for the sale of those
commodities.

On Asad sud 13, 1936 (June 1879), the monopolist, sahu Ram Das, submitted a petition to the government as follows:-

Wax and paper are being sold elsewhere in contravention of the monopoly regulations. Government offices too procure paper from other sources. How then can I operate these monopolies and pay the stipulated amounts to the government?"

Sahu Ram Das, therefore, prayed that orders be issued prescribing a fine amounting to double the profit that would have accrued to the monopolist, and confiscation of the commodities, if wax and paper were sold by anyone to persons other than the monopolist.

The petitions office (Hukum-niksari-jhagada-patti-ek-lambar-adda) recommended that such an order be issued according to section 25 of the Law on Revenue Contracts (Rairakamko in the Muluki-ain) and the terms and conditions stipulated with the monopolist.

The Bhardari endorsed the recommendation. The Adalat-Goswara was directed to issue a public notification accordingly. Before it could do so, however, the Adalat-Goswara was abolished. The notification was, therefore, issued through the Adalat Dhansar in Marga badi 5, 1936 (November 1879)

Document- 78

Forest protection in Nawalpur [Nawalparasi] November 1866
(RRS 1983, p. 17)

On Marga Badi 2, 1923 (November 1866) subba Damodar Padhya of the Tribeni-kathmahal submitted the following petition to Kathmandu:
1) Report have been received that in the Nawalparasi area ryots have reclaimed (Khoriya) forests containing valuable timber (kathbana) and thus destroyed the timber. Investigations have shown that these reports are correct.
2) I have now deputed subedar Nityananda Bhattarai to ascertain the extent of loss of sakhu, champ, toon, and sissau timber, which can be sold through the kathmahal. I shall take action against the poachers according to orders received from Kathmandu after I received his report.
3) Commercially valuable timber which can be sold through the kathmahal is being destroyed because ryots reclaim such timber indiscriminately to meet their domestic and agricultural needs.

Subba Damodar Pandhya, therefore, recommended that legislation be enacted as follows:
1) Ryots shall reclaim lands in forests containing commercially valuable timber only with the approval of the kathmahal.
2) For meeting their domestic and agricultural needs, ryots shall cut timber of small sizes against permits issued by the kathmahal. They shall not be allowed to cut commercially valuable timber which can be sold through the kathmahal for meeting such needs.
Subba Damodar Padhya also noted in his petition that a law had already been enacted prohibiting land reclamation for agricultural purposes in forests containing commercially valuable timber.

Subba Damodar Padhya's petition was referred to the Kaushal-adda. Its comments were as follows:

1) It will not be feasible for the kathmahal to issue permits for the reclamation of forest lands or for the cutting of timber needed by ryots for domestic and agricultural purposes. Such an arrangement will also cause hardships to ryots belonging to different areas.

2) No 8 of the regulations promulgated in the name of subba Damodar Pandhya states: Necessary timber and other forest products such as bamboo and sabai grass shall be supplied on payment of the prescribed fees to any person who wants to build a brick house with tiled roof, or a bridge, or to manufacture agricultural implements. Provided that such person shall be allotted only the actual quantity, and not allowed to sell the excess, if any. These facilities shall continue to be provided.

3) A proclamation shall be made to the effect that no person shall reclaim forests which contain commercially valuable timber. In case any person acts in contravention of this order, a report containing the necessary particulars shall be submitted, and action shall be taken as ordered.

This recommendation of the Kaushal-Adda was endorsed by Prime Minister Jung Bahadur on Paush badi 3, 1923 (December 1866).

Document- 79

Supply of firewood from Bulu.

(RRS 1981, p. 44-7)

The inhabitants of three villages in the Bulu area of Lalitpur district, Jhagalkot, Babyagaun and Dhusyalgaun, submitted the following petition to the government through their representative, Jaman Singh Lama:

"Until the Vikram year 1927 (A.D. 1870), the inhabitants of these three villages were under the obligation to supply charcoal to the government by rotation. This meant that each household was required to cut wood and manufacture charcoal only for fourteen days in a year. The inhabitants of other villages, including Sunaguthi and Thecho, were under the obligation to transport the charcoal to prescribed destinations. These arrangements had been reconfirmed in the course of the revenue settlements of A.D. 1854 and 1868. No other obligation was imposed on us.

"In the Vikram year 1928 (A.D. 1871), the three villages of Jhagalkot, Babyagaun and Dhusyalgaun, as well as Bulu and Pharping, were granted as birta to the junior wife of General Jit Jung. The birta owner sent ditha Ganja Singh to inspect the villages. On his recommendation, the birta-owner waived the obligation to supply charcoal. Instead, levies totalling Rs 4-4.25 were imposed in each household. The breakdown was as follows. (All figures are in paisa and rupees)."
Rs 2 on each roof.
9 annas in lieu of firewood.
2.5 annas in lieu of rain covers.
13 annas as walak levy.
9 annas in lieu of wooden beams (timba)
0.5 paisa as nuwangi levy.
2.25 annas in lieu of hides and skins (chhalahi)
1 anna as saunefagu levy.
Total Rs 4-4.25

The new arrangements continued for sixteen years from Vikrama 1928 to 1944 (A.D. 1871 to 1887).

"In the Vikrama year 1944 (A.D. 1887), the Jangi-megjin (Munitions Factory) ordered us to supply firewood. On the other hand, the thekdar (contractor appointed to collect the birta revenue) insisted that we pay Rs 4- 4 1/4 (Rs 4- 4.25) on each household as usual.

"Some of this villagers discharged both these obligations. However, others shifted to other villages. We, on our part, have approach the government with this petition.

"An order was then issued according to which people should not be subjected to dual obligations. The order also directed the appropriate officials to retain only one obligation, and to keep the villagers satisfied.

"Nevertheless, the order was not actually implemented, and we continue to suffer from the dual obligations mentioned above. As a result, we have not been able to cultivate our land at the proper time. The inhabitants of all these villages thereupon made a direct appeal to the Prime Minister, who reconfirmed the order.

"Even then, we weak and innocent people belonging to a jungle area continue to suffer. We do not have a single piece of rice-land, while our pakho lands do not yield adequate food to meet our needs for the whole year. Each household possessed only three or four ropanis of land. Even on these lands, we can raise crops only after maintaining a watch day and night to protect them from bear, monkeys, birds and rat. If we are unable to continue watching even for a single moment, our maize and other crops are eaten up by these wild birds and animals. Even if we succeed in harvesting the crops in full, the quantity is sufficient to meet our needs for six months only. During the other six months of the year, we gather wild fruits and roots to feed our families. It is under such conditions that we have been discharging our obligations to the government. On top of all this, we have been subjected to dual obligations since the Vikrama year 1944 (A.D. 1887).

"In all other parts of the country, people have to discharge only one obligation. Why then should such dual obligations be imposed on the inhabitants of these three villages alone?

"On Jestha badi 11, 1949 (May 1892), employees of the (Lalitpur) Bakyauta (Tahasil) Office arrested the headmen (mijhar) of these three villages
and placed them in detention. When we prayed that the cash levies be withdrawn, and offered to supply one dharni of charcoal every day, making a total quantity of 360 dharnis a year from each household, and reminded them that oral orders had already been issued from time to time to waive off one of the two obligations, the employees maintained that they could not accept our demand unless we produced written orders.

"We have now succeeded in escaping from detention and have come here to submit this petition. We pray that a written order confirming the oral orders issued previously to waive off one of the two obligations that have been imposed on us be sent to the Bakyanta Tahasil Office and the jangi-megjin, and that a copy of such order be provided to us."

The petition was forwarded to the muluki-adda for necessary inquiries on the order of Prime Minister Bir Shumshere by the adalat-goswara through Captain Karnabir Karki Chhetri.

The muluki-adda subsequently submitted the following report on the petition:

"In the Vikrama year 1911 (A.D. 1854), a revenue settlement was conducted in the three villages of Jhagalkot, Babiyagaun and Dhusyalgaun villages by kharidar Narayan Datta Padhya. These villages comprised fifty households. Forty households was placed under the obligation of cutting wood every other day by rotation, so that only twenty household were employed on any one day, while the remaining ten household were exempted from the obligation. 156 muris of pakho land were allotted to these households, since no rice-lands (khet) were available.

"When these three villages were granted as daijo-birta to the wife (of General Jit Jung) in the Vikrama year 1914(A.D. 1857), Lieutenant Raja Singh Khatri, on behalf of the birta-owner, appointed Vishnu Singh as dware for the collection of revenue. The inhabitant of these three villages then paid the following amount for each household:

- 2 paisa as saunefagu levy.
- 13 annas in lieu of rain-covers.

"In the Vikrama year 1938 (A.D. 1881), General Jit Jung sanctioned lokabhar arrangements for the collection of revenue in these three villages. Each household was then placed under the obligation of making the following payments:

- Rs 2 in 20-gandi rupees as serma levy.
- 2 paisa as saunefagu levy.
- 9 annas in lieu of firewood.
- 2 annas in lieu of rain-covers.
- 13 annas as walak levy.
- 9 annas in lieu of wooden beams.
- 2 paisa as nuwangi levy.
- 2 1/4 paisa in lieu of hides and skins (chhalahi)."
"In the Vikrama year 1911 (A.D. 1854), the inhabitants of these three villages had been placed under the obligation of cutting wood, in addition to 2 paisa as saunefagu levy and 1 anna in lieu of rain-covers from each household. In the Vikrama year 1938 (A.D. 1881), however, each household was placed under the obligation of making a payment of Rs 4- 4 1/4 as mentioned above under lokabhar arrangements. These arrangements did not include the obligation to cut wood. As such, it appears that the obligation was abolished, and cash payment collected at enhanced rates.

"In the Vikrama year 1946(A.D. 1889), an order was issued imposing another obligation on the inhabitants of these three villages. They were now also required to supply one dharni of firewood from each household daily for eight months in the year. For the remaining four months in the year, this obligation was commuted into a cash payment at the rate of one paisa for each dharni of firewood. The total value of the new obligation (at the rate of one paisa daily) amounted to Rs 5-10 in a year. As a result, the total fiscal obligation of each household increased from Rs 4-4.25 to Rs 9-14.25 a year. Because the inhabitants of these villages have only pakho lands and no rice-lands, their fiscal obligation seems to be unduly high."

The muluki-adda then recommended that since a levy was being collected at the rate of one dharni of firewood from each household, commuted into a cash payment at one paisa a dharni, making a total annual payment of paisa Rs 5-10, the previous obligation of cutting firewood should be remitted, and the following levies abolished:

Rs 2 (20-ganda rupee) as serma levy.
13 annas in lieu of wooden beams.
9 annas in lieu of firewood.

All other payment and obligation should be retained. In its opinion, this arrangement would cause no less of revenue to the government.

The recommendation of the muluki-adda was endorsed by the sadar-dafdarkhana and subsequently approved by Prime Minister Bir Shumshere on Falgun badi 10,1949 (February 1893). The decision was made retroactive from Vikrama year 1946(A.D. 1889).

Pasture lands in Jumla.
(RRS 1989, p. 44)

Jama Shahi of Lupakharpu village in Humla, and Dozya Mahat Chhetri of Badgaun village in Jumla, submitted the following proposal to Kathmandu.

"Throughout the territory of Jumla, no lands have been granted to any one under birta, bekh, chhap or manachamal tenure and all
manachamal assignments are in cash. There are thus only raikar lands in Jumla.

People who own pasture lands on raikar tenure demand kharchari payments from those who graze their cows, buffaloes, yaks, horses, sheep and goats on such lands. They forcibly seize the animals if the payment is not made.

In other parts of the Kingdom, pasture lands are managed, and kharchari payments collected, by the District office. This is not the case in Jumla.

We had reported the matter to the survey team which had visited Jumla in Vikram 1925, but it registered only a few pasture lands subject to the payment of kharchari.

If the government registers all pasture lands in Jumla, and collects kharchari payments, as in other parts of the kingdom, the local people will be able to graze their animals wherever they want, and the government will earn revenue."

The government then issued the following order to the local administration in Jumla, on Chaitra sudi 10, 1929 (March, 1873).
1. In case local landowners (rekhi) possess any order issued by the Gorkha government entitling them to collect kharchari payments, action shall be taken accordingly.
2. If such orders have been issued by the former kings of Jumla, these shall be referred to us, and action shall be taken as directed.
3. If rekha rights over pasture lands are being utilized on the basis of custom, rather than of official orders, these shall be abolished. Kharchari payments shall then be collected by the government. People may graze their animals at any place they like on payment of kharchari to the government.
4. The petitioners shall be paid emoluments amounting to 20 rupees each with the income from kharchari.

Document- 81
Forest protection in Bhimpedi-Hetauda region
(RRS 1980, p. 117)

On Aswin Badi 4, 1931 (September, 1874) Prime Minister Jung Bahadur, while on a tour of Chitlang, issued an order that all cultivated lands, irrespective of the tenure category, situated on the banks of the Rapti river in the Bhimphedi-Hitauda region, should be reverted to waste, and all settlements evacuated. The birta lands and cardamom forms of Ekadeva Vaidya, a royal physician, were exempted

Document- 82
Timber export trade and appointments
(RRS 1982, p. 110)

On Bhadra badi 13, 1932 (August 1875), Colonal Fatte Bahadur Kunwar Rana of the Shamshere Dal Paltan was reconfirmed as Chief of
Kathmahal operation in the region west of the Tribeni river and east of the Mahakali river. These operations were currently yielding a revenue of Rs 41,549-14 a year. Apparently in appreciation of his success in increasing revenue from that source, his jagir annulments were increased from Rs 4,154 to Rs 6,400 a year. The increment was to be effective only during the period of the assignment.

Document- 83

Forest protection in Kaski.
(RRS 1981, No 8, p. 125)

On the orders of Prime Minister Jung Bahadur, forests in the area situated between Pokhara and Dhiki-bhanjyang, the catchment area of Phewa-tal in Kaski district, had been declared protected. Red flags had been installed on the boundaries of the protected forests, along with a wooden inscription prescribing that any person who cut timber in those forests, or set fire them, or cleared them for agricultural purposes would be punished by the appropriate adalat or amal.

During the time when Colonel Tek Bahadur Kunwar Rana was Chief of the Kaski-Lamjung Tahasil Office, eight men belonging to the Bhairavdal Battalion had been employed as forest guards there. They were paid a salary of Rs 50 each. They were subsequently withdrawn.

On Baishakh sudi 7, 1938 (April 1881), Captain Komal Singh Mahat Chhetri, Chief of the Kaski-Lamjung Tahasil Office, reported to Prime Minister Ranoddip Singh that it would not be possible to protect the forest merely through the orders of the government. He pointed out that Dhiki-bhanjyang was situated at a distance of 5 or 6 kos from the Tahsil office, so that effective supervision was not possible. Captain Komal Singh Mahat Chhetri, therefore, suggested that eight forest guards be appointed to protect the forests on monthly salaries paid through the Kausi-tosakhana.

Prime Minister Ranoddip Singh than issued the following order:

"Military personnel had been assigned to protect these forests because a military contingent had been stationed at Pokhara. There is no such contingent there at present. Two men shall, therefore, be procured from the new battalion that has been created in Palpa to work as forest guards there.

Document- 84

Inquiry into clearing protected forests
(RRS 1982, p. 110)

On Paush Sudi 13,1938, Prime Minister Ranoddip Singh ordered an inquiry into unauthorized clearing of protected forests and elephant-poaching in the Tarai region east (91/139) and west (91/143) of the Kosi river, as well as in the naya-muluk (93/117).

Document- 85

Sale of old timber stocks
Before Chaitra Sudi 12, 1938 (April 1882), chief of Kathmahal offices in the naya-muluk did not have authority to sell old stocks of timber, i.e. timber cut before Marga sudi 15, 1934 (November 1877), to Indian and local merchants. They were, instead, required to finalize deals with a 100% profit in the case of high quality timber. The figure was 50% for defective timber, but the kathmahal was allowed to sell such timber even at cost if there was no alternative. The kathmahals was required to refer such deals to Kathmandu within three days and then take action as ordered.

Those arrangements did not suit Indian merchants. They pointed out that they could not be expected to leave their business and wait until their offers were formally approved from Kathmandu.

On Falgun sudi 3, 1938 (February 1882), therefore, all the kathmahals of the naya-muluk were granted authority to finalize the sale of old timber stocks and later submit reports to Kathmandu.

Document- 86

Lac exports from far western region
(RRS 1981, p. 153-5)

1. Karnali-dwar kathmahal, Kailali:- In the area under the jurisdiction of the Karnali-dwar kathmahal in the naya-muluk, arrangements were made with lac producers under which they undertook to supply half of their output free of cost to the government, and the balance at a stipulated price. In the year 1930 (A.D. 1873), total lac production in that area amounted to 3 maund and 17 sers. The government accordingly procured the entire quantity, paying Kampani Rs 20-9 for half of it. It then sold the entire quantity for Rs 123-5, and also collected duties amounting to Kampani Rs 1-10 1/4, thus making a total income of Kampani Rs 124-15 1/4.

Subsequently, the monopoly trade in lac in the area under the jurisdiction of the Karnali-Dwar Kathmahal in the naya-muluk became defunct for some reasons.

An attempt was made to revive the monopoly in the Vikrama year 1939 (A.D. 1882). One Bhaja Shah offered to take up an ijara for this monopoly for a period of three years. He stipulated payment amounting to Kampani Rs 35 in the first, Rs 100 in the second year, and Rs 200 in the second year.

The government decided not to grant an ijara for a period of three years as offered by Bhaja Shah, because it felt that it might be possible to increase the amount after one year. Captain Ambar Singh Pandit Chhetri of the Karnali-dwar kathmahal was, therefore, ordered to invite fresh bids so as to ensure that revenue from this source did not fall below the amount of Kampani Rs 124-15 1/4 collected in A.D. 1873, or at least Kampani Rs 35 offered by Bhaja Shah for the first year.
2. Mahakali-dwar kathmahal, Kanchanpur:- Captain Sahasram Majhi Chhetri, Chief of the Mahakali-dwar kathmahal in naya-muluk, had procured 12 3/4 maunds (fractions of a ser have been omitted) of lac at a total cost of Rs 47-11 1/4 (Kampani rupees). The lac, however, remained unsold.

Captain Sahasram Majhi Chhetri’s predecessor had been able to secure a Price of Kampani Rs 30-15 a maund during his term of office. According to an order dated Marga Badi 13,1936 (November 1879), Captain Sahasram Mahat Chhetri had been granted permission to sell lac at Kampani Rs 20-8a maund. However, his successor, Captain Kuldip Khadka Chhetri, received only Kampaini Rs 11 a maunds as the highest bid. The regulations that had been issued in his name prohibited him from making any sale at price below what had been procured previously. Captain Kuldip Khadka Chhetri, therefore, referred the matter to Kathmandu.

The total quantity of lac then in stock and the cost thereof were as follows:-

<table>
<thead>
<tr>
<th>Quantity (in maunds)</th>
<th>Cost (inclusive chungi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saharam Majhi Chhetri</td>
<td>12 3/4</td>
</tr>
<tr>
<td>Kuldip Khadka Chhetri</td>
<td>58 3/4</td>
</tr>
</tbody>
</table>

On Bhadra, badi 12, 1937 (August 1880), Captain Kuldip Khadka Chhetri was granted permission to invite fresh bids, and refer them to Kathmandu. Misri Lal, a merchant of the Indian market-town of Pilibhit, offered the highest did of Kampani Rs 11 a maund if the lac was of old stock, of Kampani Rs 16 a maund if it was supplied from both old and new stocks. No higher offer was received. On Chaitra Sudi 2, 1937 (March 1881), Captain Kuldip Khadka Chhetri again referred the matter to Kathmandu. Misri Lal’s offer was accepted by Kathmandu on Asad Badi 1,1938 (June 1881). The order reached the Mahakali-dwar kathmahal on Shrawan Sudi 9, 1938 (July 1881).

Captain Kuldip Khadka Chhetri then sent a peon to Pilibhit summoning Misri Lal to take delivery to the lac forthwith. Misri Lal sent the following reply: This is the monsoon season, so I cannot come now. I will come to take delivery of the lac in the month Paush (December 1881)

However, Misri Lal did not come in December 1881. Captain Kuldip Khadka Chhetri then again sent a peon to Pilibhit to fetch him. Misri Lal told the peon: "I had offered a bid for the lac in Chaitra 1937 (March 1881). My bid was accepted only in Shrawan 1938 (July 1881). I was unable to take a delivery of the lac at that time because of monsoon season, when ox-cart cannot operate. Now the price of lac in the Pilibhit market is Kampani Rs 12 or 14 a Pucca maund. I shall suffer a loss if I buy Nepali lac at Kampani Rs 16 maund. I have, therefore, decided not to take delivery.

Captain Kuldip Khadka Chhetri then reported to Kathmandu on
Falgun Badi 7, 1938 (February 1882) that Misri Lal had refused to take delivery of the lac. He added, "Because Mishri Lal belongs to India, we cannot use force to bring him here. It has thus not been possible to sell the lac at Kampani Rs 16 a maund as sanctioned."

The case was referred to Prime Minister Ranodhip Singh through the kathmahal-bandobast-adda. The Prime Minister sanctioned the following instruction to Captain Kuldip Khadka Chhetri of the Mahahkali-Dwar kathmahal on Jestha Badi 7, 1939:

"Send another order to Mishri Lal directing him to take delivery of lac within seven days, and warning him that otherwise he will be considered dishonest, and that the Gorkha Government will not entertain any application from him in any matter in the future. If Mishri Lal does not accept delivery within seven days, sell the 71 1/2 maunds of lac at the same rate (that is Kampani Rs 16 a maund) to another merchant. In the event Mishri Lal sets foot on our territory, action will be taken against him according to section 7 of the law Relating to Revenue Matter (rai-rakamko)."

Document - 87

Amalgamation of kathmahals
(RRS 1984, p. 15)

The Rapti-dwar and Deukhuri-dwar kathmahal were amalgamated on A.D. 1882. subba Padmanabha Joshi, Chief of Banke Mal, was transferred as Chief of the new kathmahal with the rank of Captain. Previously, the salary bill amounted to Kampani, Rs 3,450 for the Rapti-dwar kathmahal and K Rs 3,150 for the Deukhuri-dwar kathmahal, making a total amount of Rs. 6,600. The amount was reduced to K Rs. 4,732 for the new kathmahal.

Document - 88

Timber supply for Rana palaces
(RRS 1986, p. 123)

The following order was issued in the name of Captain Sahsra Raimajhi Chhetri of the Rautahat Mal Kachahari on Thursday, Katik Sudi 6 1939 (October, 1882):

"An office, known as Lam-adda, had been established for cutting timber from the forests of Hetauda and transporting it to the godown of the old gunpowder factory at Thamel, Kathmandu, for the construction of Palaces of Shree 5 Sarkar and Shree 3 Sarkar. For the transportation of such timber from the forwarding office (Chalani-adda) at Hetauda to the Bhimphedi office, kathmahals in the Tarai districts have been ordered to make ox-carts available, and timber had been transported accordingly. This year, Major Captain Kirtibir Adhikari Chhetri was requested that an order to make ox-carts available be sent in the name of Captain Sahasra Raimajhi Chhetri of the Rautahat mal-kachahari. You are, therefore, ordered to make ox-carts available as usual for the transportation of timber from Hetauda to Bhimphedi."
Document - 89

Forest regulations, October 1883
(RRS 1983, p. 108)

On Katik sudi 15, 1940 (October 1883), Prime Minister Ranoddip Simha had issued an order to the Sadar-jangi-kotwali-thana directing it to employ local functionaries (dware, mahane, thari, rakami) as forest guards. Their functions, duties, and privileges were prescribed as follows:

1. To impose the same restrictions as had been imposed at the time when forest guards deputed from the army were looking after the forests.

2. To arrest persons who cut trees or cleared forests without permission, produce them before the local *amal*, and have them punished, irrespective of whether they are local persons or outsiders.

3. To impose fines according to the law at rates prescribed in the wood-inscription (*kasthapatra*), and share income among themselves.

4. To submit a report on the value (*bigo*) of the timber and firewood (cut by the poacher) every month through the Sadar-jangi-kotwali-thana and take action as directed.

5. To arrest any revenue functionary who himself cuts trees, and produce him before the Sadar-jangi-kotwali-thana along with the value of the timber so cut.

6. To undergo any punishment that may be inflicted if the functionaries are unable to protect the forests, and these are destroyed as a result.

Document - 90

Timber export from *birta* forests
(RRS 1982, p. 110)

On Marga Badi 5, 1940 (November, 1883) Lt Simha Bahadur Thapa Chhetri, was placed in charge of timber sales from forests on the *birta* lands of Shree 3 bada maharani. He was ordered to spend not more than 10% of the sales proceeds for payment of salaries to employees appointed for that purpose.

Document - 91

*Birta* forests of Rana
(RRS 1981, p. 114)

On Paush sudi 2, 1940 (December 1883), Prime Minister Ranodip Singh issued the following order to Major Captain Harilal Upadhyaya, Chief of the Mahottari Revenue office:

"Make arrangements to cut timber from the *birta* forests of Shree 3 Rani Saheb as far as possible through private merchants under the *khuski* system. In case no such merchant comes forward, disburse a total sum of Rs. 4,000 in instalments of Rs. 1,000 each to Lt Singh Bahadur
Thapa for that purpose, because the land cannot be brought under cultivation until the forest is cleared. Refund the amount with the income obtained from the sale of timber.

Similar instructions were sent to Captain Dilliman Singh Basnyat, Chief of the Bhanwarpura kathmahal in Mahottari district.

Because no private merchant came forward, Lt. Singh Bahadur Thapa cleared the forest with the help of hired labour. Ten percent of the sale proceeds was sanctioned on Baishakh Badi 11 and 30, 1943 (April 1886) as wages and administrative costs.

Document - 92
Timber export trade from Tribeni, Nawalparasi
(RRS 1982, p. 111)

An agreement had been signed with private merchants for the sale of timber from the Tribeni-Dwar Kathmahal in Nawalparasi. The timber was to be cut from the local forests on tipeta basis, i.e. on government account. To supply the stipulated quantity in full, the chief of that Kathmahal, Major-Captain Bakhan Singh Basnyat Chhetri, was permitted on Baishakh Sudi 7, 1942 (April 1885) to cut timber from the prohibited forests of Tamaspur and Thakre-khola.

Document - 93
A report from Olangchunggola
(RRS 1989, p. 27)

In the Vikram year 1942, Olangchunggola was being managed under the amanat system. Lt. Randhwaj Thapa Chhetri had been appointed as Chief officer.

On Baishakh Badi 14, 1942, he sought instructions from Kathmandu on the following matters, The instructions were issued on Jestha Sudi 3, 1942 under the seal of Prime Minister Ranoddip Simha on the recommendation of the kausi-tosakhana as endorsed by the muluki-adda.

2. Firewood and fodder had been procured through the Ilam Office for military requirements. An order had been received to dispose them of at cost price and meanwhile store them safely. But only one offer has been received so far. It has been made by Chhawa Bhote of Olangchunggola, but only for the firewood. The fodder has been stored in houses of the local people, who demand that it be removed. Much of it has rotted and become unusable.

Order-.The firewood and fodder shall be auctioned in the presence of local headmen with the endorsement of the Dhankuta office. The loss, if any, shall be remitted.
(In the petition submitted by Bhotes of Olangchunggola to the Prime Minister Chandra Shumshere in Asad 1968 V.S it has been shown that one of the obligation was to maintain 500 bull yaks for use by the Government for military purpose. RRS 13(8): 113)

Document - 94
Forest and wildlife conservation, 1885
(RRS 1985, p. 68)

The following circular was sent to the administrative heads of all districts of the Tarai region from the Mechi to the Mahakali according to an order issued by Prime Minister Bir Shumshere to the madhesh-bandobasta-adda on Thursday, Paush Badi 4, 1942 (December 1885):

1. Hunting with snares has been prohibited in forests in the area under your jurisdiction. Those who violate this order shall be punished in the prescribed manner and the matter shall be reported to us.

2. No one shall be allowed to clear forests in the Tarai region south of the Chure Range. In case any one does so, he shall be placed in detention, the matter shall be reported to us, and action shall be taken as ordered.

Document - 95
Forest regulations
(RRS 1983, p. 107)

On Paush Badi 4, 1942 (December 1885), an order was issued in the name of Prime Minister Bir Shumshere to the kathamahal-bandobasta-adda to direct the chiefs of all Timber Depots (Dwar) and Forest Inspection Offices (ban-janch-jdda) from the Mechi to the Mahakali to impose the following restrictions in forest under their jurisdiction:

1. No person shall use snares for hunting in forests. In case any one does so, he shall be arrested and the matter shall be referred to us.

2. In forests south of the Chure range, only trees which have been officially marked shall be cut for commercial purposes. No other trees shall be allowed to be cut. In case any person does so, the matter shall be referred to us.

Document - 96
Export of wax, honey etc.
(RRS 1982, p. 111)

Commander in chief General Jit Jung owned a birta forest in the Kamala-Khunj area of Saptari district, when he had inherited from (Ganga) maharani, a princess of Cuttack in India whom Prime Minister Jung Bahadur had married. On Magh Sudi 15, 1942 (January, 1886), a one-year ijara was granted to Jujuman of Bhaktapur for the export of wax, honey, piplamul, Piper longum and Terminalia chebula from that forest for a sum of Rs 363.
Document - 97

Proceed of timber from *birta* forests
(RRS 1982, p. 111)

On *Magh Badi* 30, 1942 (January, 1886), Captain Dharmadatta Upadhyaya, chief of the Koshi-Pachhuwari *Kathmahal* in Saptari district, was ordered to credit the sale proceeds of timber from *birta* forests of *Shree 3 Kanchha maharani* (i.e. wife of Prime Minister Bir Shumshere) in the account of His Majesty and transmit the amount to the appropriate Revenue Office.

Document - 98

Sale of timber in Kanchanpur
(RRS 1982, p. 111)

Dry timber from forests under the jurisdiction of Mahakali and Guwari *kathmahals* in Kanchanpur district, as marked by the Forest Inspection Office (*ban-janch-adda*), was sold to Gopal Das, as merchant on *Baishakh sudi 2* 1943 (April, 1886). He was expected to lift the timber within the stipulated time-limit on payment of the stipulated price and duties (*mahasul*).

Document - 99

Sale of timber from Babai, Bardiya
(RRS 1982, p. 111)

An agreement had been signed with Brigadier Colonel Ran Singh Sijapati Chhetri for the sale of dry timber from the Babai-dwar-kathmahal in Bardiya district. The timber was to be marked by the *ban-janch-adda* for that purpose. The quantity stipulated under the agreement could not be supplied in full, hence the advance payment made by the Brigadier-Colonel was refunded on *Baishakh Sudi 7*, 1943 (April 1886).

Document - 100

Forest protection in Kathmandu valley.
(RRS 1975, p. 192)

Until *Katik* 1940 (October, 1883), Military personnel were appointed as forest guards in protected forests. In that year, these guards were removed, and the local village functionaries (*dware,thari,mahane*, etc) were made responsible for forest protection. This arrangement was extended in 1943 (1886) to forests in the Nagarkot area which had previously been granted as *birta* to General Padma Jung Rana.

Document - 101

Forest regulation in *birta* forest.
(RRS 1983, p. 108)

The *Sadar-jangi-kotwali-thana* at Indrachok in Kathmandu submitted the following report to Prime Minister Bir Shumshere:

"Guards had been deputed from the army to look after forests within
Kathmandu Valley. But these were subsequently withdrawn."

On Katik sud 15, 1940 (October 1883), Prime Minister Ranoddip Simha had issued an order to the Sadar-jangi-kotwali-thana directing it to employ local functionaries (dware, mahane, thari, rakami) as forest guards. Their functions, duties, and privileges were prescribed (see Document 89).

Forest within Kathmandu valley have been looked after according to these regulations. Forest guards appointed by the Junior Princess (Kanchhi Maiyan) in her daijo-birta forests in Gokarna, Raite, and Bhoteni, and by General Padma Jung Rana in his birta forests in Nagarkot, Chhahare, and Amaikot, have been removed. It, therefore, appears necessary to employ local revenue functionaries in looking after these forests as well in the manner indicated in the aforesaid regulations.

On Jestha Badi 7, 1943 (May, 1886) an order was issued in the name of Prime Minister Bir Shumshere endorsing the above recommendation, and directing the Sadar-jangi-kotwali-thana at Indrachok in Kathmandu to make necessary arrangements to have those forests looked after by local revenue functionaries as in the case of other forests (see Document 100). The order added, "You shall be held responsible if such arrangements are not made, and the forests are destroyed as a result."

Orders were accordingly issued to local headmen (thari, mukhiya, mijhar, gaurung, naike, mahane, mohinaike) and revenue functionaries (rakami) in the villages of Chilaune-bhanjyang, Chituwa-bhanjyang, Archale, Lamagar, Anaikot, Golmadevi and Chhaharegaun.

The Sadar-jangi-kotwali-thana subsequently reported to the Prime Minister: "In accordance with this order, we have made the local revenue functionaries sign bonds and look after the forests. It is now necessary to issue formal orders (sanad) in their names."

The may 1886 order also mentions the rate of fines for different offenses indicated in the wood-Inscription. These are as follows:

1. Any person who breaks the eggs of birds shall be punished with a fine of one rupee.
2. Any person who kills a bird shall be punished with a fine of one rupee.
3. Any person who takes out loads of foliage (syaula) from forests shall be punished with a fine of two rupees and eight annas.
4. Any person who cuts unyu grass from forests shall be punished with fine of eight annas.
5. Any person who grazes cows and buffaloes in the forests shall be punished with fine of eight annas for each animals.
6. Any person who grazes sheep and goats in forests shall be punished with fine of five annas for each animal.
7. Any person who plucks fruits or dig tarul (Diascorea anguina) in forests shall be punished with fine of one rupee and eight annas.
8. Any person who takes out dry or rotten timber from forests shall be
punished with a fine of eight annas.

9. In case any of our hunters hunts in the forests without our permission, he shall be punished with a fine of ten rupees.

10. Any person who cuts a tree below the height of a man's thigh shall be punished with a fine of five rupees.

11. Any person who cuts a tree below the height of a man's waist shall be punished with a fine of ten rupees.

12. Any person who cuts a tree above the height of a man's waist shall be punished with a fine of fifteen rupees.

13. Any person who only moves about in forests shall be punished with a fine of five annas.

14. If any hunter of the general visits the forests with motive of hunting, he shall be punished with a fine of ten rupees, and the case shall be referred to us.

15. Hunters paid to hunt shall be imprisoned for six months. the sentence shall not be commuted to a fine.

16. Bears and tigers coming out of forests shall be killed by any one who can do so. This shall not be considered to be an offense.

Jestha sudi 7, 1943 (May 1886)

Document - 102

Forest conservation in Morang, May 1886
(RRS 1989, p. 84-5)

The Rangeli Goswara office was established in Morang district with captain Dashrath Padhya as its chief to reclaim jhora forest lands and sell the timber.

Regulations promulgated in the name of that office included the following:

"No person shall be permitted to hunt in sira forests in Morang district without a license (sanad).

"People may kill tiger, bear, boar, or wild buffalo (arna), which intrude into their fields, but shall not be permitted to hunt or lay traps and snares for other birds and animals.

"In case any tiger has killed any human being or cow in sira forests, permission shall be granted to kill it. But in case any person kills or hunts other animals on that pretext, he shall be arrested and despatched to the sadar-adalat (Kathmandu) along with his gun or other weapon.

"In case any person is found to have killed any animal with guns or snares, he shall be arrested and his weapons shall be seized. He shall be handed over to the adalat for imprisonment for a term of six months in irons.

"In case any person had cleared lands within sira forests and built homesteads, he shall be evicted from such lands along with his family. His hut shall be demolished but his possessions shall be handed over to him.
In accordance with these regulations, captain Dasharath Padhya started an inspection tour of *sira* forests in the region west of Chatra in the month of *Paush* 1942.

At a place west of Letang, the inspection team found a tract of forest lands being cleared by some Limbus. The Limbus fled on hearing news of its arrival, leaving three axes behind.

Another group which was clearing a tract of forest lands further east similarly fled, leaving one *khurpa* behind.

No such illegal reclamation was detected in the area between the Ratuwa and Mechi rivers.

A similar inspection team had toured the area in *Vikram* 1941.

Document - 103

*Forest protection in Tarai and inner Tarai*

(RRS 1983, p. 18-9)

On *Shrawan* 1, 1945 (July 1888), the government of Nepal promulgated regulations for the protection of forests in the Tarai and inner Tarai districts. A summary of these regulations is given below:

1. No one shall be allowed to poach timber without the permission of the *kathmahal*. Persons who furnish information to the appropriate authorities about such poaching shall be granted a reward amounting to 10 percent of the sum realised from the poacher. Local officials and revenue functionaries who fail to furnish such information shall be punished with a fine amounting to 50 percent of that sum.

2. Any person who needs timber for domestic and agricultural purposes may submit an application to the local revenue office through the local *chaudhari* or *jimidari* during the months of *Magh* through *Jestate*. The *kathmahal* will then issue permits for such timber on the recommendation of the revenue office. No such permit shall be issued nor shall timber be allowed to be taken away from forests even against permits, during the other months of the year. However, a person whose house has been damaged or destroyed by any natural calamity may obtain a permit at any time through the revenue office and the *kathmahal*. Timber in excess of the quantity mentioned in the permit shall in no circumstances be taken away.

3. Employees of the *Hatisar* (Elephant Depot) shall conduct regular tours to check whether or not lands in protected forest areas have been reclaimed for cultivation and settlement without permission. In case any such reclamation is detected, the reclaimed lands shall be reverted to waste, and the settler's huts shall be demolished. The *Hatisar* employees may appropriate the settlers' goods for their own use.

4. Persons who furnish information regarding the reclamation of protected forests, or of forests containing commercially valuable timber, shall be suitably rewarded, while local officials and revenue functionaries who
fail to furnish such information shall be punished at the discretion of the government.


Document - 104

*Birta* grants to Prime Minister Bir Shumshere  
(RRS 1983, p. 103)

On *Paush sudi* 15,1948 (December 1891), the following areas were granted to Prime Minister Bir Shumshere as *birta*:

1. Rice fields, villages and forests in the Banagaun area of Nagarkot, confiscated from General Padma Jung Rana.

2. Rice fields, villages and forests, in the Matatirtha area of Machchhegaun. Most of these lands previously belonged to *guthi*, *rajguthi*, or *rakam* tenure, for which appropriate compensation was provided.

Document - 105

Forest protection in Harihar cave in Kaski, August 1893  
(RRS 1985, p. 73-4)

Amara Giri is said to have been a disciple of Digambara Giri of Bhameshwara in the Pashupati temple area (of Kathmandu). He is also said to have installed the images of Harihar at the Bhalam Cave. He was succeeded by his disciple, Sahadeva Giri.

After the death of Amara Giri, the local villagers destroyed the forest indiscriminately, Gosain Sahadeva Giri, therefore, submitted the following petition to Prime Minister Bir Shumshere:

"We have raised a forest all around the Bhalam cave in Kaski district. Because the forest was used recklessly, my elder brother and preceptor, Gosain Amara Giri, submitted a petition to Prime Minister Jung Bahadur at Thapathali. Accordingly, an order was issued in the *Vikrama* year 1906 (1849) granting him authority to protect the forest around the cave and prohibiting the killing of birds and animals there (see D69). We then installed images of deities in the cave, performed religious functions regularly, and protected the forest. "These days the local people say: "your preceptor has died, and no order has been issued granting you authority to protect the forest; hence we cannot obey your orders". They are therefore, using the forest indiscriminately.

Gosain Sahadeva Giri, therefore, prayed that he be granted authority to protect the forest.

In particular, he requested that the following orders be issued:

1. "The order issued in the *Vikrama* year 1906 (A.D.1849) in the name of Goswami Amara Giri has been reconfirmed. Forests in the watershed area around the cave shall be protected. Trees shall be cut with the
permission of the caretaker (Chitaidar) only for meeting the reasonable needs of the employees of the shrine and visiting mendicants and other persons for firewood. No one shall be allowed to cut timber in the forest without such permission.

2. "In case any person cuts timber without permission, or hunts in the forest, you must report the matter to the (Kaski-Lamjung) Rajya-tahasil and adalat.

3. "Necessary order to take action on such reports shall be issued in the names of the above mentioned offices as well."

Sahadeva Giri prayed that he would look after the forest properly if orders containing these provisions were issued.

The petition was forwarded by the adalat-goswara for appropriate action according to the law to the Itachapli Adalat.

The itachapli-adalat recommended that orders as requested by Sahadeva Giri be issued. The recommendation was submitted by the ditha of that adalat Purushottam Padhya, through Judge Nanda Raj Gurugharana of the adalat-goswara to Prime Minister Bir Shumshere.

Prime Minister Bir Shumshere endorsed that recommendation on Thursday, Shrawan Sudi 12, 1950 (August 1893).

Document - 106
Sale of forest products in the far-western Tarai region (RRS 1980, p. 24-5)

Chandika Chaube, a merchant, offered to buy 1 maund and 8 seers of Pipali (Piper longum) held in stock by the Babai-khair-adda in the naya-muluk region. He quoted a price of Rs 25 a maund, thus offering a sum of Rs 30 for the entire quantity. The actual cost was calculated at Rs 9 and 9 3/4 annas. Bids were invited to find out if any other merchant would offer a higher price. None did. Meanwhile, it was found that the weight of the stock had gone down to 1 maund only because of loss of moisture. The value of the shortfall amounted to Rs 1 and 9 3/4 annas at cost price.

Because the regulations of the kumarichok or the khair-adda contained no provision for the remission of such losses, Lt Tek Bahadur Khatri Chhetri of Babai khair-adda submitted a petition to Kathmandu on Paush sudi 5, 1953 Samvat.

The petition was forwarded to the naya-muluk-rakam-goswara. It expressed the opinion that there were precedents for such remissions, and remission should, therefore, be granted in the present case as well. Moreover, it pointed out that the government would make a profit from the sale because the cost was only Rs 9 and 9 3/4 annas, whereas it would not get Rs 25 for the remaining 1 maund of the commodity.

The case was then discussed by the naya-muluk-bandobast-adda. It
concurred with the opinion of the *naya-muluk-rakam-gosuara* on the basis of the following points:-

(a) Section 1 of the Law on Remission (*Minaha Mojara Ko*) In the *muluki-ain* contains the following provisions:-

In cases concerning *ijara* and *amanat* arrangements, remissions shall be granted only if so provided for in law, regulations, administrative orders, or contract documents. If no specific provision has been made, inquiries shall be conducted to find out if expenditure has been incurred for essential purpose which will benefit both the king and the subjects, the matter shall be referred to the *Mukhtiyar*, and action shall be taken as directed. The regulation of the Babai *khair-adda* contain no provision for remission in the weight of *Pipali*.

(b) During the years 1950 and 1951 *Samvat*, a total quantity of 305 maund and approximately 25 seers of this commodity had been collected by the Babai *khair-dda*. When a new chief was appointed there, there he was granted remission for 15 maunds. Hence there is a precedent on the basis of which remission may granted in the present case.

The opinion of the *naya-muluk-bandobasta-adda* was endorsed by the *muluki-adda* and finally by the Prime Minister, Bir Shumshere, on *Baishakh Sudi* 15, 1954 (April, 1897).

**Document - 107**

*Firewood for brick kilns*  
(RRS 1981, p. 74-5)

On *Baishakh Sudi* 5, 1954 (April 1897), Captain Khadga Bahadur Raimajhi Chhetri of the *naya-muluk-ban-janch-gosuara* (Forest Inspection Office of *naya-muluk*) submitted the following report:

Because of growing population, the demand for baked bricks and tiles has been rising in Nepalgunj. Approximately 80 cart-loads of firewood are required to bake 100,000 bricks. However, the government has so far not collected any revenue from firewood used in brick-kilns. There are about 16 brick-kilns, big and small, in Nepalgunj at present. Permits for fire-wood may, therefore, be issued by the local *kathmahal* on payment of a fee of 10 annas each for a cart-load of *chaubardi* size, and 8 annas each for cart-load of *dobardi* size. Such a system would bring in a revenue of Rs 800 or Rs 900 every year from Nepalgunj, Koilabas, Golaghat and Brahmadeo-Mandi. In addition, it would prevent the indiscriminate cutting of firewood from the local forests.

The opinion of the *naya-muluk-bandobast-adda* on this proposal was as follows:

The proposal is good. But the rates that have been recommended are too high, because at present the price of a *chaubardi* cart-load of firewood is *8 annas* or *10 annas* each. It is recommended that fees be collected at the following rates for firewood meant exclusively for baking bricks and tiles at the following rates:
2 annas on each cart-load.
3 paisa for each donkey or pony-load.
2 paisa for each man-load.

The recommendation of the naya-muluk-bandobast-adda was endorsed by the muluki-adda. However, on Jestha sudi 10, 1954 (May 1897), Prime Minister Bir Shumshere issued the following order:

Only such quantity of firewood as is actually used for baking bricks shall be supplied. If no fee is collected from brick-kilns under existing arrangements, no payment shall be collected for such supplies.

Document - 108
Abolition of the rakam-goswara and khair-adda
(RRS 1981, p. 152-3)

Major-Captain Jit Bahadur Khatri Chhetri, Chief of the naya-muluk-bandobast-adda, submitted the following report to the government on Aswin Badi 9, 1954 (September 1897):

"Dariyaburdi-khair-addas had been established some years ago for the sale and export of catechu as well as the wood of trees washed away by floods.

"In the Vikrama year 1949 (A.D. 1892), the (naya-muluk) rakam-goswara-adda was established, and functions relating to contracts and monopolies (Mahalat), previously performed by mal and kathmahal addas, were placed under the jurisdiction of these khair-addas.

"In the Vikrama year 1953 (A.D. 1896), the government adopted the policy of permitting open exports of catechu [Acacia catechu] subject to the payment of a duty of Kampani Rs 14 per maund, because sale and export of this commodity under the amanat system resulted in losses. On that year, revenue from the export duty on catechu totalled kampani Rs 8,137-4 1/4.

Until the Vikrama year 1952 (A.D. 1895), these khair addas collected a sum of Kampani Rs 49, 136-3 1/4 every year. Subsequently Abkari (excise duty on liquor) and kascharai (tax on cattle grazed on pasture lands) taxes were transferred from khair-addas to the appropriate mal-adda. These taxes were yielding a sum of Kampani Rs 28, 460-1 1/4 every year. Thus the amount to be collected by khair-addas is now only Kampani Rs 20,676-1 every year.

"Moreover, most of the sources of revenue under the jurisdiction of khair-adda have been given out on contract while only a few are being operated under the amanat system. Finally, function relating to dariyabudi timber have been transferred from khair-addas to the appropriate kathmahals.

"Thus the following amount are being spent on khair addas for the collection of only Kampani Rs 20,676 a year:-
"The chiefs of khair-addas have occasionally defalcated what they collected, or else failed to make any collections at all. Some of them have fled to India, or died. Arrears have, therefore, accumulated, and the government has suffered losses."

Major-Captain Jit Bahadur Khatri Chhetri of naya-muluk-bandobast-adda then submitted the following suggestions:-
(a) The (naya-muluk) rakam-goswara and all khair-addas should be abolished from the Vikrama year 1954 (A.D. 1897).
(b) Sources of revenue operated by these office should be transferred to the appropriate mal or Kathmahal, as the case may be.
(c) Kathmahals should also be responsible for the collection of export duty on catechu. For this, they should be provided with additional staff.

"In case these suggestions are implemented, a saving of Kampani Rs 6,631 will result."

These suggestions were endorsed by the muluki-adda, and approved by Prime Minister Bir Shumshere on Katik Badi 5,1954 (October 1897).

Document - 109

Reclamation of forest areas, 1897
(RRS 1983, p. 28-30)

Lt. Gagan Singh Swanr Chhetri had obtained a contract to clear a tract of jhora forest adjoining the no-man's land on the Nepal-India border in Nepalgunj within a period of three years. Under the terms of the contract, he stipulated a total payment of Kampani Rs 59,000 to the government.

Haji Mohammed Khan, Shivaratan, and other persons obtained a similar contract to clear a tract of Jhora forest west of the payment of Kampani Rs 70,000.

In Vikrama 1854 (A.D.1897) both these contracts were cancelled on the ground that the contractors had not complied with the stipulated terms and conditions. The government then decided to establish a separate office to clear both these jhora forests and export the timber on amanat basis. Regulations were promulgated outlining the working procedure of that office. The substantive provisions of these regulation are follows:

3. Timber from both from both these forests shall be transported to Jamunaha-Ghat,

4. Expenses have been sanctioned as follows:
1 paisa per foot for cutting.
1 paisa do for transportation.
10 percent less for branches and other small size timber.

5. Timber extracted from these forests in the manner shall be converted into ties (sleepers) of 6'x8"x4.5" size each. Surplus timber, or timber not suitable for producing for the purchase of such timber shall be invited from merchants and reported to the government. Sleepers should be made of uniform size, as otherwise they cannot be sold.

6. Timber shall be stacked at a place safe from floods on a floor made of inferior varieties of timber so as to ensure that the dampness of the earth does not reach it. The stacks shall be guarded well from fire accidents, dacoits, etc. Wages shall be paid to the guards at current rates. If the total amount does not exceed Rs 50, disbursements may be made in the presence of representatives of the local mal and amini offices. If the amount exceeds Rs 50, sanction must be obtained from the government.

7. In case any merchant makes an offer for specified varieties of timber, he must sign a bond accordingly, and also furnish a deposit amounting to 5 percent of the value of the offer. Timber shall then be released on payment of the value and export duties. In case the merchant doesn’t take delivery of the timber within the stipulated time-limit, the deposit shall be confiscated, and the timber shall be sold to other merchants.

8. Bids shall be invited from lumbermen, carters, sawyers, and boatmen who can cut timber, transport it to the ferry point (ghat), and make sleepers before the season ends. Such bids may be accepted on the condition that the total cost does not exceed four annas for each sleeper.

9. A responsible person shall be appointed to function as chaudhari of the lumbermen. His responsibility shall be to recruit lumbermen at stipulated rates of wages, disburse advance payment to them, and ensure that supplies of timber reach in kathmahal in time. The remuneration to the chaudhari shall consist of one-fourth of the sale price of one piece of timber of each variety supplied through him. As far as possible, only local people shall be appointed as chaudharis.

10. A separate chaudhari shall be appointed for carters as well. Each carter shall be paid wages at the rate of one paisa per foot of timber per kos.

11. Dadani advances may be provided to lumbermen and carters through the appropriate chaudharis.

12. Timber for domestic and agricultural purposes shall be supplied to local people against permits issued by the Banke mal.

The following staff was sanctioned for the new office:

<table>
<thead>
<tr>
<th>Designation</th>
<th>Annual salary (kampani Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lieutenant</td>
<td>Rs 600</td>
</tr>
<tr>
<td>1 Mukhiya</td>
<td>Rs 400</td>
</tr>
<tr>
<td>1 Subedar</td>
<td>Rs 150</td>
</tr>
</tbody>
</table>
Document - 110

Abolition of Ilam-dwar kathmahal.
(RRS 1984, p. 16)

In Marga 1954 (November 1897) the Ilam-dwar kathmahal was abolished and its functions were assigned to the Ilam District amini. According to an order issued to that office on Baishakh Sudi 7, 1955 (April 1898).

"We have abolished the Ilam-dwar kathmahal. No person shall be granted permission to cut trees in forests in that area. Dry and fallen timber may, however, be collected and sold to the highest bidder in the presence of representatives of the Ilam District Headquarters (gaunda) office. Timber shall be supplied to the local people for building purposes, as well as for manufacturing plows and other agricultural implements against permits issued by the Ilam District Headquarters office against a fee of 2 annas for each household. Duties at ferry points (ghat) and market (bazaar), and fees for forest products (bankar) previously collected by the Ilam-dwar kathmahal, shall be collected by Illam District amini in the future. In order to perform these functions, the post of a nausinda has been sanctioned for Ilam District amini on a yearly salary of Rs. 900.

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New chief of Chhtauna-Jamuni-dwar kathmahal.
(RRS 1984, p. 18-20)

In the year 1954 (A.D. 1897) subba Gauri Padhya of the Chhatauna Jamuni Dwarf Kathmahal in Rautahat-Bara districts was dismissed. Captain Krishna Bahadur Kunwar of the Kamala-Sarsor Kathmahal was appointed to fill up the vacancy with the rank of Naibsubba

Particulars of the employees of the Chhatauna-Jamuni dwarf kathmahal is given

Similar schedules were approved on Marga Badi 9.1954 (November 1897) for the following kathmahals in the far western region.

(1) Rapti-Kusma-dwar kathmahal.
(2) Mohana-dwar kathmahal.
(3) Mahakali-dwar kathmahal.
(4) Babai-dwar kathmahal.
Document - 112

New Chief of Banaganga-dwar kathmamhal.
(RRS 1984, p. 20)

The post to Chief of the Banaganga- Dwar Kathmamhal in Butwal fell vacant in A. D. 1897 when Captain Bharivabhupa Sen died. Lt. Krishna Bahadur Singh of the local ban-janch-adda (Forest Inspection office) was appointed as his successor with the rank of naibsubba. His salary was kept unchanged at Kampani Rs 833, and 10 annas, 2.5 paisa.

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Abolition of Babai-dwar kathmamhal.
(RRS 1984, p. 16)

The Babai-dwar kathmamhal in Bardiya district was abolished in Aswin 1955 (September 1898). Its functions were then taken over by the Bardiya mal-adda (Revenue office). (order to the Bardiya mal, Asad Sudi 3, 1957/June 1900, RRC Vol 72, pp. 739-55)

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Kathmahals at the end of 19th century
(RRS 1979, p. 160)

Kathmahals in the Tarai and Inner Tarai Regions at the end of 19th Century.

<table>
<thead>
<tr>
<th>Kathmahal</th>
<th>District</th>
<th>Kathmahal</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Tinpatan</td>
<td>Sindhuli</td>
<td>12. Dunduwa</td>
<td>Dang</td>
</tr>
<tr>
<td>8. Tribeni</td>
<td>Nawalparasi</td>
<td>17. Mahakali</td>
<td>Kanchanpur</td>
</tr>
</tbody>
</table>

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Revenue collection on birta lands
(RRS 1981, p. 122)

Prime Minister Bir Shumshere’s senior Queen (Shree Tin Jetha bada maharani) owned four villages in the Palanchok area as birta. Salambu, Bigati, Kaphale and Majhiphede. In the Vikrama year 1956, an ijara for the collection revenue in these villages yielded Mohar Rs. 886. For the following year, the amount was increased by 1/2 percent according to the law to Mohar Rs 890 and 8 annas. Lilanath Kharyal, a resident of Kharyalthok Village in Palanchok, made this offer with captain Thir Bahadur Shah as his personal surety. No higher bid was received, hence his offer was accepted. Under the term of the ijara, the ijadar was empowered to collect revenue from the following sources: Serma, Saunefagu and other customary homestead (ghargani) taxes and levies,
judicial fines and penalties, escheat property, and fines collected from persons belonging to non-sacred-thread-wearing castes and communities who were guilty of illicit sexual intercourses within their own caste or community (chak-chakui). The ijaradar has no right to collect revenue from the following sources: raja nka levies, buried property (kalyanadhana), dharmadhikara levies, fines and penalties collected from persons guilty of Panchakhat crimes, jhara levy from rakam households, taxes levied on forestry or riverine produce, ad hoc (bedarta) taxes and levies, arrears of payment and unclaimed property (rahata, behate, udanta, gadanta). The ijaradar was also given the following instructions. "Promote reclamation and settlement in the villages, keep the ryots satisfied, and make collection in the customary manner. Complete payments within schedule, along with interest if arrears accumulate. No remission what so ever shall be granted in the stipulated amount in the plea of natural calamities or your inability to make collections. Dispense justice according to the Ain and do not harass and oppress the people. If any ryot complain to us that you have taken bribes or to the repayments (salami), or harassed and oppressed the people wrongfully by collecting unauthorized payments or otherwise, we shall punish you according the law."

The ijarara was granted by Prime Minister Bir Shumshere through the na.rainhi-ti-nagadi-tahabil-office. It stipulated payment in three instalments: Rs 400 in the month of Marga, Rs. 290 1/2 in Falgun, and Rs. 200 in Chaitra.

Katik Sudi 11, 1957 (October, 1900).

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Saw mills in Tarai region.

Regarding the establishment and operation of saw mills in Tarai region following information are available in RRS (1981, p. 150-1)

1. During A.D. 1900-1, the government of Nepal installed a saw mill at Fultekra in Nepalgunj under the management of a British engineer from Calcutta.

2. On Bhaadra badi 10,19578 (August 1900), naibsubba Thir Bahadur Khatri Chhetri of the Rapti-Dwar kathmahal was granted permission to debit Kampani Rs 97-12 as expenses incurred for the purchase of unbaked bricks thatch, etc. for constructing quarters for workers employed at the (Fultekra) Saw-mill.

3. On the recommendation of sardar Dhundiraj Shahi, Chief of the naya-muluk-goswara, naibsubba Thir Bahadur Khatri Chhetri, Chief of the Rapti-dwar kathmahal, was granted permission of Jestha sudi 15, 1958 (June 1901) to spend Kampani Rs 1,600 for the construction of residential bungalow and well for the British engineer.

4. On the request of naibsubba Thir Bahadur Khatri Chhetri of the Rapti-Dwar Kathmahal, subba Yog Pratap Rana, Chief of the Banke mal-adda, was ordered (in May 1901) to disburse a total sum of Kampani Rs 6,000 for
paying the salaries and wages of the engineer, workers, coolies, etc of the (Fultekra) saw mill.

5. naibsubba Thir Bahadur Khatri Chhetri was similarly granted (in November 1901) permission to debit Kampani Rs 640 as expenses incurred on wages, materials, etc. required for the saw mill.

6. In December 1901, a saw mill had been installed in the Tribeni area of western Nepal also with machinery imported from India.

7. These mills were installed mainly for the production of ties required for the Indian railways.

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Abolition of Tribeni dariyabudi-adda
(RRS 1984, p. 21-3)

dariyabudi means trees washed away by floods. Prime Minister Bir Shumshere appears to have opened separate offices in different areas to collect such timber for export. These offices were known as dariyabudi-adda(s). One of them was located on the Tribeni river in Nawalparasi.

On Bhadra Sudi 12, 1955 (August 1898), Prime Minister Bir Shumshere ordered the abolition of the Tribeni dariyabudi-adda. The adda had 21 employees and an annual salary bill of Kampani Rs 1,606, but it collected only 500 or 600 flood uprooted trees a year.

The work done by the Tribeni dariyabudi-adda was then assigned to the Tribeni-dwar kathamahal.

For the Vikrama year 1955(A.D. 1898-99), the Tribeni-dwar kathamahal issued a contract for the collection of dariyabudi timber. The contractor was required to collect Sissoo, Sal and other dariyabudi timber measuring more than 3'*20' and supply it to the Tribeni-dwar kathamahal, against payment of the expenses incurred on cutting and transportation. He was allowed to export timber of smaller size to India.

No individual was willing to accept the contract for the Vikrama year 1956.

The Tribeni-dwar kathamahal, therefore, undertook the collection of dariyabudi timber on amanat basis during that year. It collected 454 pieces of timber and sold 61 of them accordingly.

However, the Tribeni-dwar kathamahal faced a shortage of men to do the work. The area under its jurisdiction extended over a stretch of 18 or 19 kos along the banks of the Tribeni river, but it was not provided with additional employees to perform the work of the abolished Tribeni dariyabudi-adda.

On Magh Sudi 14, 1957 (January 1901), the Tribeni-dwar kathamahal submitted a petition to Prime Minister Bir Shumshere requesting an annual allocation of Kampani Rs 328 for appointing six employees (1
nausinda, 1 hawaldar and 4 peons with total annual salary Kampani Rs. 328) to collect dariyabudi timber.

In its petition, the Tribeni-dwar kathmahal also pointed out that six additional employees with a similar annual salary bill of K Rs 328 had been sanctioned for the Kosipachhuwari-dwar kathmahal when the local dariyabudi adda was abolished and its function were assigned to the kathmahal.

In support of its request, the Tribeni-dwar kathmahal wrote," In case timber is not collected from the banks of the river, it will be carried away, thereby causing loss of revenue to the government. The work cannot be done only with the help of Indian boatmen (mallaha). Money is needed to collect the timber from inaccessible river flats, cut it, and transport it by river with the help of Indian boatmen, who must be supplied with dadani credit".

The request of the Tribeni-dwar kathmahal was approved on Jestha 1958 (May 1901) by the new Prime Minister, Deva Shumshere Jung Bahadur Rana.

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Kathmahals in Nawalparasi
(RRS 1984, p. 21)

In A.D. 1901, the areas of Butwal, Dang-Deukhuri, Sunsar, and Surkhet comprised a single administrative unit, with a goswara (District Headquarters office).

There were two kathmahals on the Tribeni river in the Nawalparasi area of this administrative district, the Sardi (birta) kathmahal and the Tribeni-dwar kathmahal.

The offices of both kathmahals were located at the same place near the banks of the Tribeni river. During the monsoon, both office shifted to a place in the adjoining hill area.

There was a market near the offices of the kathmahals where their employees bought food and other supplies. However, the market remained closed during the six months of the monsoon. Local jimidars were, therefore, ordered to supply provisions at current rates during that period by rotation to the employees of the Tribeni-dwar kathmahal.

Jimidars were reluctant to comply with this order because it obliged them to transport food and other supplies to the hill camp of the Tribeni-Dwar kathmahal. No such arrangements existed for the employees of the Sardi (Birta) Kathmahal.

A saw-mill had been installed near the offices of the two kathmahals near the banks of the Tribeni river. It produced ties (sleepers) for the Indian railways for both kathmahals.

The following orders were issued on Asad 10, 1958 (June 24, 1901):-
1. Employees of these kathamahals shall not shift to their hill camp during monsoon because railway ties must be produced all the year round.

2. Food and other provisions shall be purchased in the local markets so long as it remains open. After the market is closed, such provisions shall be purchased at current prices from local jimidars as designated by the Palhimal (Revenue office).

Document - 119
Problems of Tax Collection, 1910
(RRS 1981, p. 96-98)

A notification issued on Paush 16, 1967 (December 30, 1910), declared, "It is not feasible to fix rates every year for the commutation of taxes in commodities for the purpose of collection. In case rates are fixed in this manner, the delay in obtaining approval from the centre prevents people from paying their taxes at a time when they have the means. Moreover, peasants suffer hardships because the commutation rates are changed every year.

"With the people's welfare in mind, we have studied the schedule of prices of agricultural commodities reported to be current during the months of Paush and Magh in the Vikram years 1964 and 1965 (i.e. January-February, 1908 and 1909), as well as the customary commutation rates. On the basis of these two schedules, we have prescribed permanent commutation rates as follows. All commodities payable as taxes shall be converted into cash at these rates for the purpose of payment at revenue offices.

However, rates current in the village shall be used for the following:

(a) Rents payable to jagirdars.

(b) Private transactions.

Commutation rates per rupee (only rates related to forest products are extracted from the list. Though the rates are made to other areas, it was not made for forest products)

Kathmandu, Kirtipur, Patan and Bhadgaun

<table>
<thead>
<tr>
<th>Areas</th>
<th>Firewood</th>
<th>Leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside the valley</td>
<td>25 paisa per load</td>
<td>12 paisa per load</td>
</tr>
<tr>
<td>Outside the valley</td>
<td>14 paisa per load</td>
<td>10 paisa per load</td>
</tr>
<tr>
<td>For all areas</td>
<td></td>
<td>1 paisa per bundle</td>
</tr>
</tbody>
</table>

Document - 120
Conservation of Musk-deer
(RRS 1989, p. 3)

The following order was sent to the bada-hakims of the districts of East No. 2, and East No. 3 on Magh 19, 1970 (February, 1914) with the objective of protecting muck-deer:-

1. Talukdars in villages of the Himalayan region shall maintain registers of
hunters in the areas under their jurisdiction and check whether they stay at home or hunt musk-deer. They shall also produce the hunters before the District Office every month.

2. Government officers on the Nepal-Tibet boarder who are under obligation to supply prescribed quantities of musk to the government shall submit reports specifying the hunters and the places where they have been sent to hunt musk-deer for the purpose of meeting that obligation. They shall be liable to punishment if it is proved that they have procured musk in excess of the quantity stipulated for supply to the government.

3. Inspection teams shall be sent to forests in the Himalayan region which are inhabited by musk-deer to seize poachers, if any. If any poacher has installed any trap or snare, he shall be arrested and produced before the Prime Minister in Kathmandu.

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Ban on production and sale of pine torches, 1922

On Paush 25, 1978 (January 11, 1922), Prime Minister Chandra Shumshere issued an order banning the production of torches (diyalo) from the resinous wood of the pine tree.

The Forest Inspection office (ban-janch) of Banke requested a clarification whether the ban should be enforced only in the forests of the Tarai region, or whether people who brought such torches from the hill regions for sale and purchases in the markets of the Tarai should also be arrested and punished.

On Baishakh 31, 1979 (May 13, 1922), the following order was issued in this connection: "Reports shall be submitted on when production of pine torches in the hill region started and whether or not people will be subjected to hardships in case a ban is imposed on such production. A decision will then be taken either to impose a total ban on production of pine torches, or permit such production on payment of a reasonable fee, so that people are not subjected to any hardships, and forests are not destroyed. For the time being, the ban shall not be applicable to production of pine torches in the hill regions and their sale and purchase in the market. Action shall be taken according to the order of Paush 25, 1978 in respect to production of pine torches from the forests of the Tarai region. In case it is proved that pine torches produced from the forests of the Tarai region are falsely represented as produced in the hill regions and offered for sale and purchase in the market the appropriate forest office shall take necessary action."

The kathamahal-bandobast-adda subsequently submitted the following report; "In case production and sale of pine torches from the forests of the hill region are banned, it is evident that people will be subjected to hardships and that revenue from duties will also decline. It would, therefore, seem appropriate to issue orders retaining the
existing arrangements. Reports of the Forest Department (ban-goswara) indicate that in the hill regions the local people use pine torches for lighting their homes; hence a ban on production and sale will subject them to hardships. Arrangements have accordingly been sanctioned according to which people are permitted to produce pine torches from the local forests for household use only in consultation with talukdar in such a manner that forests are not destroyed. If, therefore, a ban on sale and purchase, other than on production for household use, is imposed, it cannot be claimed that people will be subjected to any undue hardship."

The report of the kathmahal-bandobast-adda continued: "As regards the possibility of a decline on revenue on case a ban is imposed on the sale and purchase of pine torches, it is clear that in the absence of a ban, poacher will extract pine torches from the forests of the Tarai region and falsely claim that they have been brought from the hill regions. Revenue will decline as a result. The tariff schedules of bazaar-addas show that pine torches are subject to payment of a duty, but no orders or regulations have been issued empowering the Forest Department (ban-goswara) to permit the export and sale of pine torches."

The kathmahal-bandobast-adda then recommended the following arrangements:

1. A ban shall be imposed on production of pine torches from forests in the hill regions, and their sale and purchase in the market.

2. In case any person is proved to have violated the ban, he shall be put in irons, and handed over to the adalat for punishment according to the law, and the torches shall be confiscated, as prescribed in the order of Paush 25, 1978 (January 11, 1922) for the Tarai region.

3. In case a monopoly has been introduced in the production, sale, and purchase of pine torches in the hill region, it shall be abolished.

4. A public notification regarding the ban shall be issued in the districts of the Tarai region also.

The recommendations were approved by Prime Minister Chandra Shumshere on Shrawan 2, 1982 (July 17, 1925). The Bharadari (sresta-phant) was ordered on Bhadra 11, 1984 (August 27, 1927) to issue the public notification mentioned above.

Document - 122

A birta grants to Prime Minister Bhim Shumshere
(RRS, 1988, p. 140)

On Shrawan 30, 1988 (August 13, 1931), a royal order was issued granting a tract of 5,905 bigha of forest adjoining Khasyauli on the road to Nautanwa in the Palhi division of Butwal district to the Prime Minister, Bhim Shumshere J. B. Rana, as sarbakara-akara-sarbanga-mafi birta.
The order also contains the following provisions:

1. The lands are inheritable. They may also be sold, bequeathed, or otherwise alienated without any restriction.

2. The *birta* owner may cut timber from the forest, sell or export it, and appropriate the income whenever he likes. The statutory obligation to transit half of such income to the government has been waived.

3. The *birta* owner may bring the lands under cultivation and appropriate the income.

4. No taxes shall be collected on these *birta* lands, including the *gadimubarak*, *goddhuwa*, and *chumawan* levies.