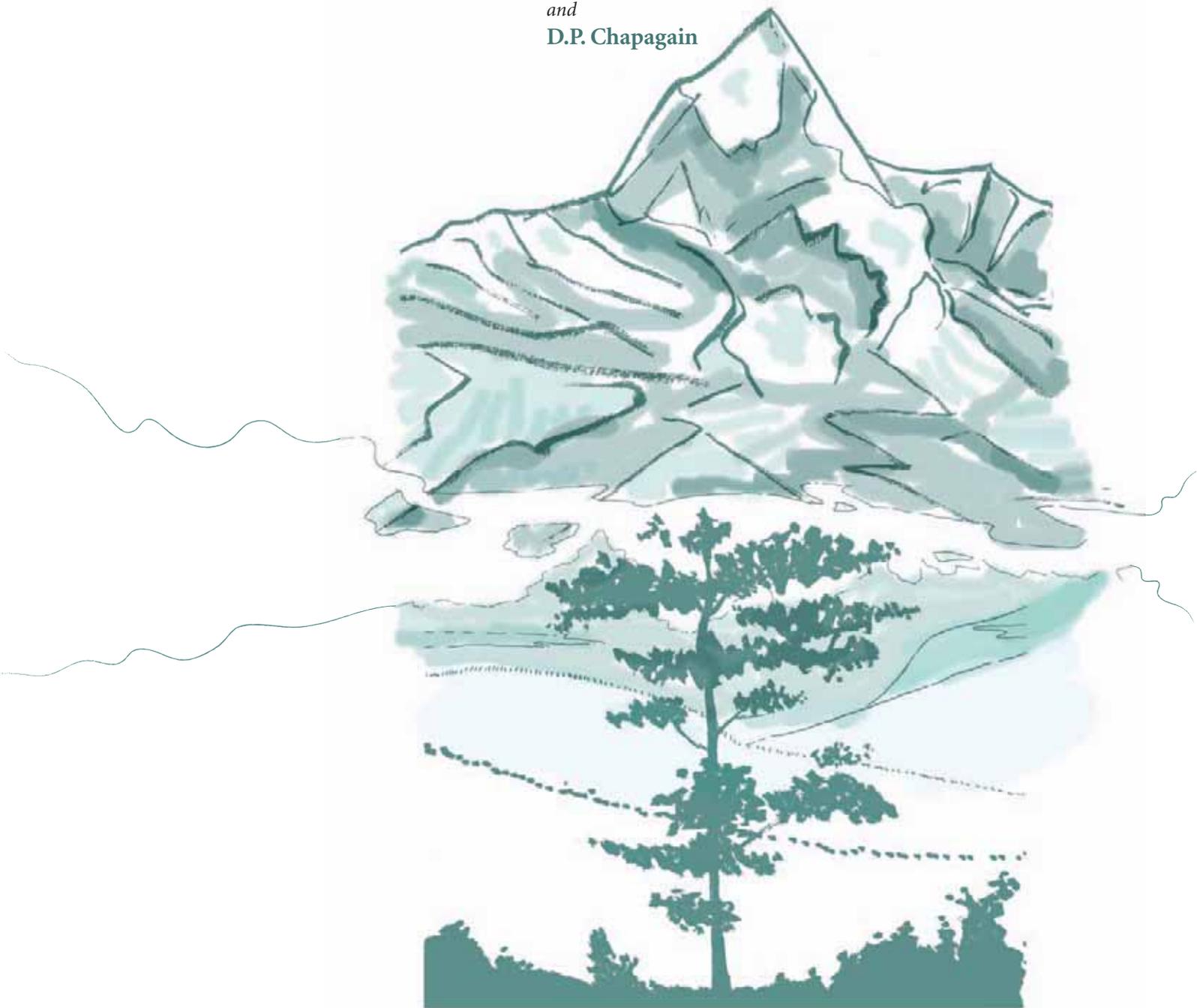


**Trends in forest ownership, forest resources
tenure and institutional arrangements:
are they contributing to better forest
management and poverty reduction?**

Community and leasehold forestry for the poor: Nepal case study

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Summary

Nepal is a small landlocked country in Asia situated between two large countries – China in the north and India in the south. It is highly rich in biodiversity. The country's total surface area is 147 181 km² and it has a population of 24 million people. Its forest ecosystem and vegetation vary with altitude, which ranges from near sea level to the highest point on earth. Nepal's total forest area of 3 635 500 ha is distributed across the four major geographic regions: the mountains, the mid-hills, the Siwaliks and the Terai (plain). The high-altitude mountains have alpine and temperate forests of *Quercus* spp, *Cedrus deodara*, *Pinus excelsa* and *Arundonaria*, whereas broadleaf species of *Schima wallichii*, *Castanopsis* and chirpine (*Pinus roxburghii*) abound in the mid-hills. The Terai and Siwalik hills are dominated by tropical and sub-tropical forests of *Shorea robusta* and associates.

Nepal's forests are broadly divided into two ownership categories: national and private. National forests are further categorized into: (1) government-managed forests; (2) community forests; (3) leasehold forests; (4) religious forests; and (5) protected forests. Community, leasehold and religious forests are managed by local communities or user groups, while government-managed and protected forests are directly administered and protected by government agencies. Private forests are managed by individual households. The present study focuses on community and leasehold forestry.

Community forests cover more than 1 million ha across the country, in all but one district and in all ecozones. In addition, under the leasehold forestry programme, groups of poor families manage about 8 500 ha of forests in 31 mid-hill and mountain districts.

The objective of this study is to increase understanding of the relation between forest resource tenure and forest management, particularly the implications for poverty alleviation.

The study covers the broad national context of community and leasehold forests, focusing on the policy issues and socio-psychological factors that are driving forces for change. Policies, strategy, laws and study reports related to community and leasehold forestry were reviewed. The researchers held discussions with forestry officials in areas where community and leasehold forestry programmes are implemented simultaneously by the same district forest officers and forestry rangers. They also discussed forest ownership and management with community forest user groups (CFUGs) and leasehold groups.

Although the government holds ownership rights for all categories of forest, CFUGs are given use rights under contracts with the District Forest Office. Other stakeholders, such as community forestry projects/funding agencies and local non-governmental organizations (NGOs) related to community forestry, provide various kinds of support to the CFUGs, which are federated at the district, regional and national levels and work as pressure groups and advocacy agents for community forestry. Major stakeholders in leasehold forestry are leasehold groups, the District Forest Office, the Regional Director of Forest, the Ministry of Forest and Soil Conservation, the Department of Livestock Services and donor agencies.

The Forest Act of 1993 and the Forest Regulation of 1995 provide the legal foundation for both community and leasehold forestry. The main objective of community forestry is to fulfil the need for basic forest products, including fuelwood, fodder, bedding materials for livestock and timber. However, in recent years, greater emphasis is being placed on livelihoods and poverty alleviation. All kinds of forests, ranging from well-stocked virgin to degraded, can be handed over as community forests. CFUGs encompass all traditional forest user households without discrimination regarding socio-economic conditions. Users are thus generally heterogeneous in nature. The main forest management document for a community forest is the operational plan that is drawn up between the District Forest Office and the CFUG. Such plans are normally prepared for five-year periods and renewed or revised every five to ten years. For management purposes, the forest is divided into four to eight blocks or compartments, and management activities are planned accordingly. The most important of these activities are clearing unwanted weeds, removing dead, dying and diseased trees, thinning thick stems and pruning branches to maintain horizontal space between stems, and planting in gaps. At present, the management of natural regenerated forests is preferred to the establishment of new plantations. The CFUGs are authorized to fix the prices of forest products for distribution and sale, but the prices charged to outsiders or non-members of CFUGs should not be less than those charged by the government.

When selling Sal (*Shorea robusta*) timber and khair (*Acacia catechu*) outside the user group, CFUGs are required to pass on 15 percent of the proceeds to the government (District Forest Office). In addition, the government has imposed provisions that CFUGs must comply with; for example, groups must spend at least 25 percent of their total income from the forest on forest management; the remaining 75 percent can be spent on community development activities decided by the CFUG. Most community forests are still protection-oriented and do not manage their forests intensively; communities have successfully reversed deforestation and improved forest conditions.

Leasehold forestry specifically targets the poorest and marginal households. It aims to raise the incomes and improve the living conditions of poor families, while restoring degraded forests. Only degraded forests or shrublands with or without scattered trees are leased out as leasehold forest. A visible impact of the leasehold forestry programme has been increased forage production, which supports animal husbandry (mainly of goats and buffaloes) as the main income source of the households concerned. Leasehold groups establish plantations of multipurpose tree, fodder and fruit-bearing species on their leased land. Such resources can yield useful medium-term products from the third year onwards. Forest land is intensively managed using both horizontal and vertical space. Ground forage, pineapple, turmeric, ginger, banana and shade-bearing non-timber forest products (NTFPs) are planted under partial tree shade. Small leasehold groups with membership ranging from five to 20 households have exclusive and long-term use rights over the forest land. The average area of a leasehold forest is 3 to 20 ha, and the lease period is 40 years, extendable for another 40 years. These provisions have led to a strong sense of ownership over the leasehold forest among participating leaseholders and are a driving force for intensive management of the forest. All the benefits from the forest directly accrue to the leasehold group members and there is no need to share them with the government. Although leasehold forestry has benefited only 15 000 households, it makes a vital contribution to improving livelihoods, reducing poverty and rehabilitating degraded forests.

Private forests are owned and managed by individuals or any other legally defined entity. Nearly 1 million out of about 3.4 million private agricultural holdings have planted forest trees. Of these, about 166 000 holdings have compact plantations.

In community forestry, the main second-generation issues to be addressed in the future are governance, livelihoods and sustainable forest management. This implies a need to modify government policies and legislation to ensure more democratic and equitable governance, improved livelihoods for rural communities, and the economically efficient and socially desirable management of forest resources for sustained benefits.

The leasehold forestry programme targets the poor and is an effective model for poverty alleviation and the improvement of degraded forests. However, although it has been implemented for a decade, the programme has had relatively small coverage so far. It is therefore time to extend this programme for poverty alleviation, outside as well as within community forests. This requires high inputs in terms of funds, materials, training and other support. Some of the leasehold groups in three districts have been federated into leasehold cooperatives, which are sustainable and successful in marketing forest and agricultural products. All leasehold groups should gradually be associated into multipurpose cooperatives, while the bureaucratic process of leasehold forestry should be simplified and administered through the District Forest Offices.

Regarding land tenure and forest management, community forestry is an extensive programme that covers large areas and populations, while leasehold forestry is an intensive programme for poor and marginal people. Leasehold groups have a stronger sense of ownership in their forests than CFUGs have. However, the two programmes should not be treated as mutually exclusive, but should rather be regarded as complementing each other. The national forests that are directly administered by the Department of Forest are rapidly deteriorating in quality and quantity, while community and leasehold forestry have emerged as viable alternatives for sustainable resource management, livelihood improvement and poverty alleviation.

Introduction

BACKGROUND

The institutional arrangements for Nepal's forestry subsector have undergone major changes in the last half century in terms of tenurial arrangements and the ensuing management practices. Prior to 1957, a large segment of the country's forests were owned and managed privately, although some forests were under other forms of tenure, such as those owned by religious trusts or the State. At that time, there was no ceiling on the area of land that an individual or family could own. In 1957, the government nationalized all forests and took over their management responsibility. This radical change in forest tenure was accompanied by the implementation of officially sponsored resettlement schemes, which involved clearing several thousand hectares of forest lands in the southern plains,

called the Terai. The combined effect of forest nationalization and forest clearing led to illegal tree felling in nationalized forests and the establishment of illegal settlements on forest lands. In retrospect, an important factor that was ignored in the nationalization of forests was the rural people's dependence on forests for a wide range of products, such as fodder, bedding materials for animals, roofing materials for houses and other non-timber products for different uses.

As could be expected, the government's management of nationalized forests was generally poor because it defied the time-tested traditional system of community management of natural resources as common property. This led to recognition of the advantages of decentralizing forest management as community forestry, initially on an experimental basis. As a result of the positive results achieved from the experiment, the government decided to recognize formally the decentralized management of nationally owned forests. This provided the background for the evolution of the different systems of forest tenure that are observable in Nepal today.

PURPOSE AND OUTLINE

The purpose of this paper is to contribute to a better understanding of the relationship between forest resource tenure and forest management, with a focus on the implications for poverty alleviation. The term "tenure" is used here to imply a bundle of rights that are recognized by law and custom and that a person, a group of people or a private or public entity holds in land or trees. The paper seeks to examine the nature of these rights, their origin, their operationalization and the ways they relate to other activities, including the planting, conservation and utilization of trees.

SOURCES OF INFORMATION AND METHODOLOGY

This study's review and analysis of policy and legislation are based on the available official documents; the statistics used are based on available secondary and anecdotal information. Two different sources of data and information were used. Information about trees on privately owned land came from the National Sample Censuses of Agriculture, published by the Central Bureau of Statistics (CBS). These provide information on the trees planted by farm households, broken down by district and size of holding, for the survey years 1991/1992 and 2001/2002. However, the reporting methods of these censuses differ, so the comparability of the information available from these sources is also limited. The earlier (1991/1992) survey reports the total number of trees standing at the time of survey, while the later one reports separately the area of compact plantation, the number of trees on this and the number of trees scattered on the entire holding. Information on community and leasehold forestry came from the Department of Forest, the Department of Forest Research and Survey and various projects and programmes supported by bilateral, multilateral and international donors.

Additional information was collected during field visits and discussions with forestry staff and community forest user groups (CFUGs). The study researchers visited remote Himalayan, mid-hills and Terai districts and discussed different types of forest ownership, the forest management systems used and their contribution to poverty reduction with forestry officials, field staff and the officials of CFUGs, leasehold groups and the Federation of Community Forest User Group in Nepal (FECOFUN).

To the extent permitted by the available information, comparisons were made among different systems of forest tenure – private, community and leasehold – and their management systems.

DEFINITIONS, SCOPE AND LIMITATIONS

This study focuses on the tenure of forest resources and its influence on the planting, conservation and utilization of trees. According to the Forest Act of 1993, any area that is wholly or partially covered by trees is defined as a forest. FAO defines forest as "all lands with a forest cover, i.e., with trees whose crown cover is more than 10 percent of the area, that is not used primarily for purposes other than forest" (FAO, 2004). This definition emphasizes that forests are not used primarily for purposes other than forest, but is less clear on the meaning of forest use. This study uses the Forest Act definition, which uses the term forest to include all trees other than the horticultural plants that have been planted in privately owned and operated lands. The study covers three types of forests: private, i.e., trees planted on privately owned land; community; and leasehold.

The study examines the broad national context for community and leasehold forestry, concentrating more on policy aspects than on operational details. In addition to analysing the available data, it also discusses the socio-psychological aspects that drive changes, particularly the confidence that arises among beneficiaries from a sense of ownership in forest management.

The depth of the analysis and discussion is influenced by the limitations of the information available. As well as a general shortage of information, the available data (as indicated in the preceding subsection) are not always comparable, and this is a major limitation. Information on leasehold and community forestry is limited to the number of forest user groups, the average size of such groups, and the approximate area of land occupied by community and leasehold forests.

Leasehold forestry is directed to the “poorest of the poor”. In rural Nepal, the area and quality of land operated by a rural family is the main indicator of its poverty, so it is reasonable to assume that the households covered by the leasehold forestry programme own either no or very little land. This is one of the major assumptions of the following analysis.

The criteria for designating a community forest are different. A community living in the vicinity of a patch of hitherto degraded forest, and willing to contribute to its rehabilitation, can be entrusted with its management and utilization within the framework of an agreed management plan. The management plan generally gives priority to rehabilitation through regeneration and does not encourage the planting of exotic species or fruit trees. In this tenancy type, no discrimination is made according to the size of holding, incomes or other socio-economic factors of participating households.

The policy analysis part of the study focuses on the existing legislative instruments and official policies. Their evolution and underlying rationale are reviewed when it is necessary to clarify a particular issue.

THE COUNTRY CONTEXT

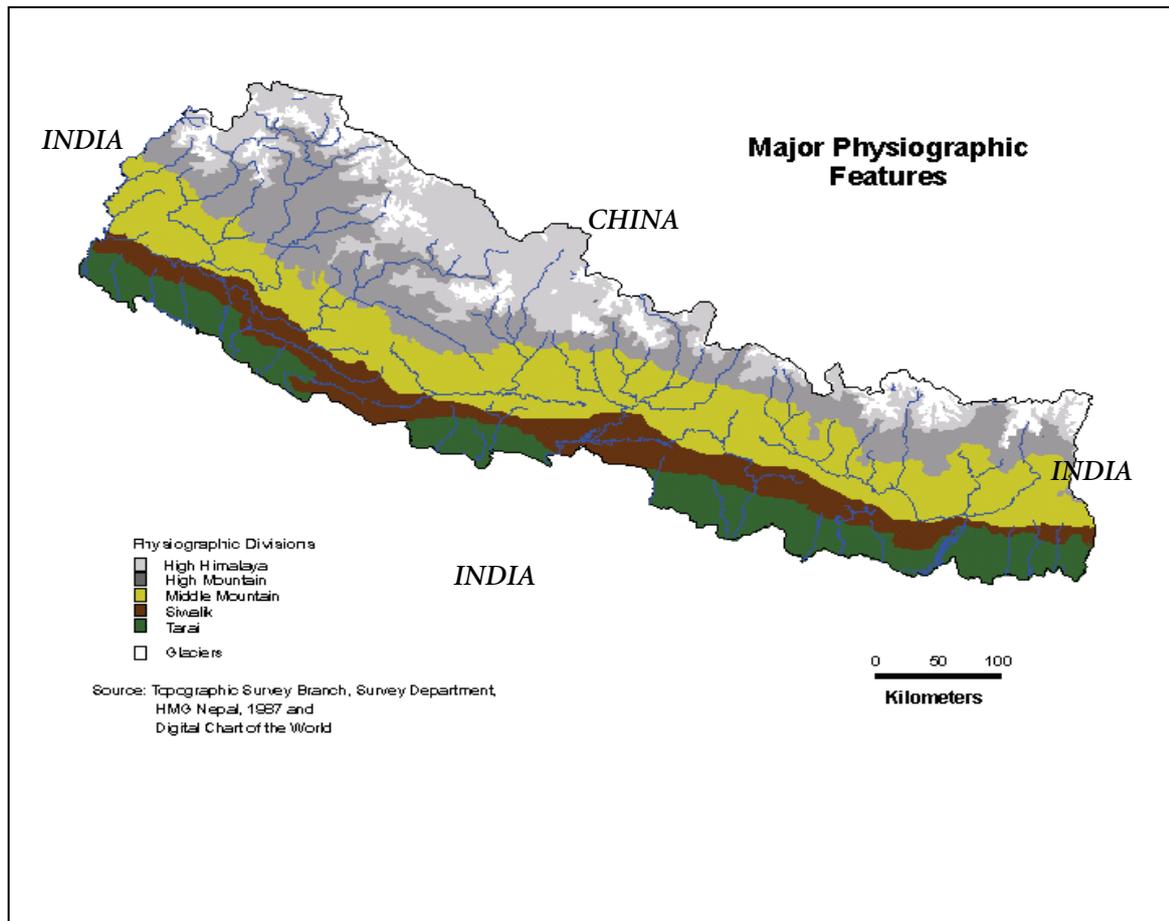
Surrounded by China in the north and India in the east, west and south, Nepal is a landlocked country that lacks opportunities for large-scale timber trade via sea transport. It covers a total area of 147 181 km² of very diverse land.

There are three broad topographic regions based on altitude and terrain: mountains, hills and Terai (plains in the south). Physiographically, the country is divided into four broad regions: mountains, hills, Siwaliks and Terai (Figure 1). Mountain and hill regions are generally intercepted by valleys, many of which have similar temperature conditions to those of the Terai. The average temperature decreases as altitude increases. Nepal is in the southwest monsoon region, and average rainfall generally decreases from east to west. The agro-ecological diversity created by the wide-ranging altitudes (and hence temperatures), rainfall patterns and soil types has contributed to the country's extremely rich and diverse biodiversity.

Ecological diversity and the role of forests in livelihoods

Ecological diversity has also contributed to the evolution of a variety of complex farming systems. About 87 percent of Nepal's population of 24 million people pursue subsistence and semi-subsistence farming systems that integrate crop production with animal husbandry and depend on forest products for household use and animal husbandry. Generally, the role of livestock in farm incomes increases with altitude. Almost all farm households keep some bovines for farm power and manure, but the exact number depends on access to forest and common pasture for fodder and bedding materials. Forests thereby also contribute to maintaining soil fertility by supplying materials for the domesticated animals that generate farmyard manure, which is still the main source of fertilizer in Nepal, although mineral fertilizers are becoming popular in accessible areas. In addition, forests are a source of wild fruits and other edible plants, and the major source of medicinal plants. In summary, forests are an inalienable part of Nepalese livelihood systems, as is recognized by existing policies and reflected in the legislative instruments currently in force.

FIGURE 1
Major physiographic features of Nepal



Policies, laws and government organization concerning forest resource tenure

POLICIES AND LAWS

Two laws and the policies related to them have the greatest influence on forest resource tenure: the Forest Act of 1993¹⁷ and the Lands Act of 1964. The first provides tenure systems for forests – including private, leasehold and community forestry – while maintaining State ownership of all forest lands. The following are the categories of forest defined by the Forest Act:

- *National forest*: All forests other than private forest, regardless of the demarcation of their boundaries and including cultivated or uncultivated land, roads, ponds, lakes, rivers, streams and the shingly land that is surrounded by or in the vicinity of a forest.
- *Government-managed forest*: National forests managed by the government.
- *Protected forest*: National forests that the government has declared protected in consideration of their environmental, scientific and cultural importance.
- *Community forest*: National forests that have been entrusted to user groups (as defined in clause 25 of the act) for development, conservation and utilization in the interest of the community.
- *Leasehold forest*: National forests that have been leased (according to clause 32 of the act) for specified purpose(s) to a legally defined institution, forest-based industry or community.
- *Religious forest*: National forests that have been entrusted to any religious entity, group or community as specified in clause 35 of the act.
- *Private forest*: The planted or protected forests on land that belongs to an individual as per the prevailing law.

These definitions make it clear that ownership of all except private forests rests with the State. The differences among categories of forest regard only access to the forest.

Although the Forest Act created an opening for private forestry, it still reflects the Private Forest Nationalization Act of 1957 by inserting a clause (clause 39) on registration. This states that any individual or institution willing to register a private forest may do so at the District Forest Office, which can then issue a certificate of registration. The purpose of the 1957 act, as indicated by its title, was to nationalize the then privately owned forests. Although not mandatory, the mere existence of this clause is a source of concern, especially because of the nationalization of private forests in the past.

The impact of the 1957 act, combined with the launching of resettlement programmes, led to a decline in national forest cover, from 51 percent in the 1950s to 45.6 percent in 1964. To address the problem of encroachment on nationalized forests a new Forest Act was promulgated and enforced in 1961. This was the first law specifically designed to protect nationalized forests, while “maintaining the interest of the common people”. However, this law too failed to address the problem of forest encroachment, as it declared all lands except

¹⁷ This act came into force on 3 April 1995, when the Forestry Regulations were also promulgated.

cultivated land to be State property. Such a declaration may even have triggered the deforestation process, as the population was growing rapidly and opportunities for employment outside agriculture were not readily available.

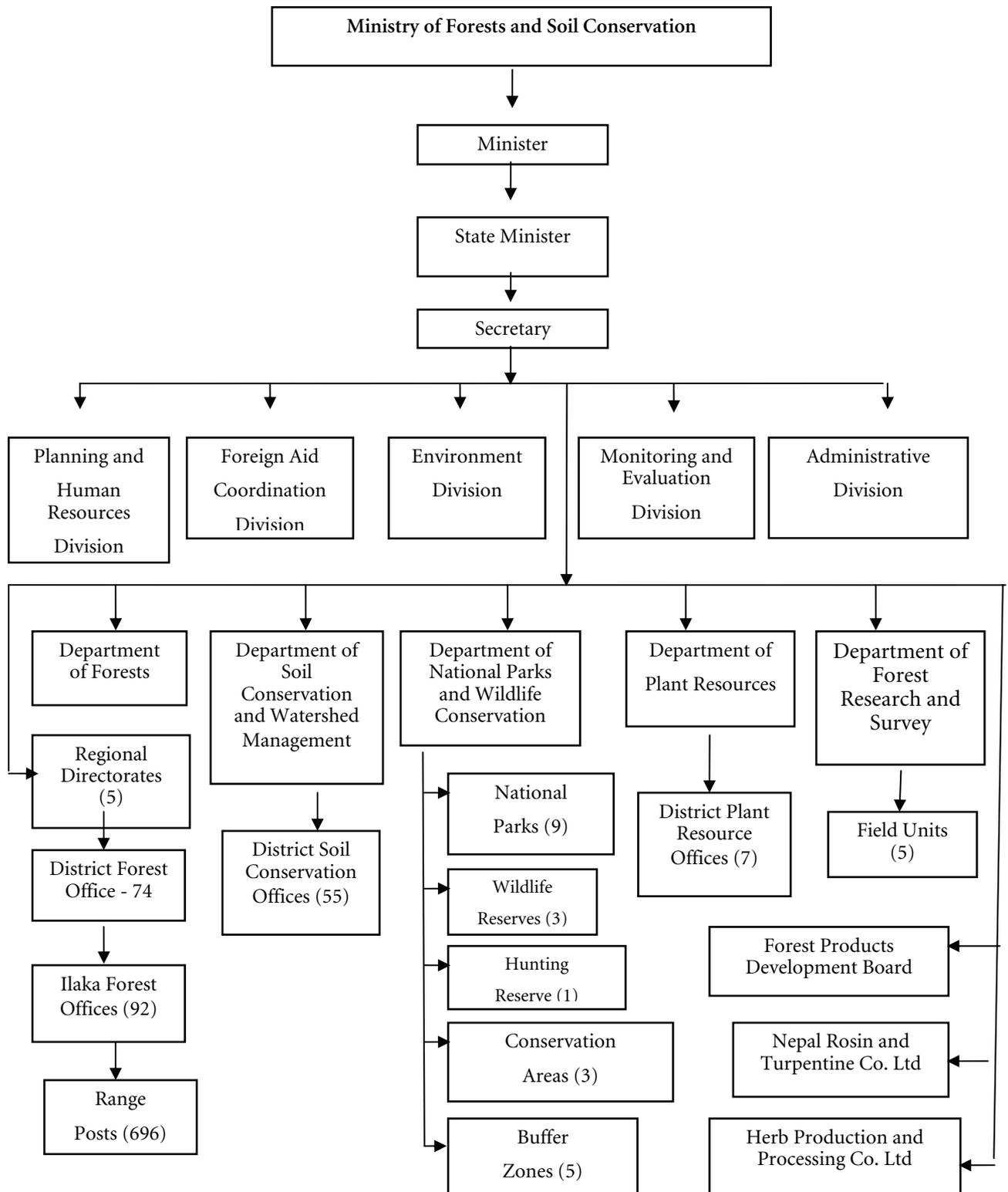
The Lands Act of 1964 provides for ownership of land by individuals and other legally defined entities. It is designed primarily for cultivable land, and fixes land ceilings for the hills, including the mountain, Kathmandu valley (where the capital city is located) and Terai regions. However, it does not restrict landowners regarding the ways they use the land, which can include forestry purposes if the landowner chooses. Considering that farming systems in most parts of the country integrate crops and livestock, implying a need for fodder and bedding materials for livestock, the Lands Act also provides for land area in addition to cultivated land. The owner can use this “homestead land” for planting fodder and other trees and grasses.

GOVERNMENT ORGANIZATIONAL STRUCTURE

Although Parliament¹⁸ is the final authority in Nepal, executive authority is exercised by a Cabinet consisting of the Prime Minister and Ministers. The operational responsibility for periodic policy planning and implementation of forestry and related matters lies with the Ministry of Forests and Soil Conservation, which is headed by a Minister or Minister of State. Operational responsibilities are entrusted to five specialized departments operating at the regional (five), district (75) and subdistrict levels. The main department concerned with private (for registration purposes only), community and leasehold forestry is the Department of Forest. The current organizational structure of the ministry and its departments is presented in Figure 2.

¹⁸ According to Article 44 of the Constitution of the Kingdom of Nepal 1990, the term “Parliament” refers to the House of Representatives, the National Council and His Majesty the King all together.

FIGURE 2
Organizational structure of the Ministry of Forests and Soil Conservation



Source: Ministry of Forests and Soil Conservation, 2002.

Discussion

STAKEHOLDERS IN COMMUNITY AND LEASEHOLD FORESTRY

CFUGs and district forest offices of the Department of Forest are the rights-holders of community forests in Nepal. In addition to the CFUG federation, FECOFUN, there is another federated body – the National Federation of User Groups (NEFUG) – which accepts membership from all kinds of user groups in the forestry sector. A number of bilateral projects and national and international non-governmental organizations (NGOs) provide direct funding and other support to community forestry in Nepal.¹⁹

The main stakeholders in leasehold forestry are leasehold groups, District Forest Offices, the Department of Forest, Regional Directors of Forest, leasehold group cooperatives, the Department of Livestock Services and the International Fund for Agricultural Development (IFAD).²⁰

OWNERSHIP, RIGHTS AND RESPONSIBILITIES IN PRIVATE, COMMUNITY AND LEASEHOLD FORESTS

Private forests

According to the National Sample Census of Agriculture 2001/2002 (CBS, 2004), nearly 1 million out of roughly 3.4 million private agricultural holdings²¹ contain planted forest trees. Of these, about 166 000 holdings contain compact plantations (Table 1).

TABLE 1:
Status of private forests, 2001/2002 (Source: Annex 1.)

Particulars	Value
Total number of agricultural holdings	3 364 139
Total area of agricultural holdings	2 654 037 ha
Holdings reporting forest tree plantation	989 860
Holdings reporting compact plantation	166 126
Area of compact plantation	27 057 ha
Total number of trees in compact plantations	20 545 131
Total number of trees in scattered plantations	18 159 813

¹⁹ The traditional users of a forest living in its vicinity form a CFUG. Each CFUG elects an executive Forest User Committee (FUC), prepares a group constitution and is officially registered with the District Forest Office. CFUGs are legally recognized entities under the Forest Act. While FECOFUN is an exclusive organization for CFUGs only, NEFUG includes leasehold forestry groups, CFUGs, soil conservation groups and buffer zone groups. Many bilateral donors support community forestry projects in Nepal. These include the Nepal–Australia Community Forestry Project in three districts, the Nepal–Swiss Community Forestry Project in three districts, the German Agency for Technical Cooperation (GTZ) in three districts, and the United Kingdom’s Department for International Development (DFID) in 15 districts.

²⁰ The District Forest Office implements both leasehold and community forestry programmes at the district level. The Department of Forest is the lead agency in the Leasehold Forestry and Livestock Programme. The Regional Director of Forest is the authority that approves lease certificates. Leasehold groups are federated at the district level and have been registered as multipurpose cooperatives in three districts. There is a plan to federate all leasehold groups into cooperatives for their long-term sustainability. The District Livestock Services Office is a line agency that provides inputs for forage development in leased land and veterinary services for leasers’ livestock.

²¹ According to the National Sample Census of Agriculture 2001/2002 (CBS, 2004), a holding is considered to be an agricultural unit when it has an area under crops of at least 0.01272 ha in the hills or 0.01355 ha in the Terai; or keeps at least two head of cattle or buffalo; or keeps at least five head of sheep or goats; or keeps at least 20 head of poultry; or keeps any combination of livestock considered equivalent to two head of cattle or buffalo (e.g., one head of cattle and four sheep).

The discussion in the rest of this section focuses on community and leasehold forests; private forests are mentioned only when demanded by the specific context.

Community forests

The Forest Act of 1993 and the Forest Regulation of 1995 make clear provisions regarding rights and responsibilities related to community forests. CFUGs are legally registered at the District Forest Office. In accordance with the provisions made in their operational plans, CFUGs are authorized to protect and manage the forest and establish plantations. The operational plan of a community forest is prepared by the CFUG, with technical assistance from forestry rangers and/or NGOs and approval from the District Forest Officer. It describes how to protect, manage and utilize the forest, fix the price of, sell or dispose of its products, and punish violators. An operational plan is valid for five years and renewable after termination.

The CFUG can collect forest products and distribute them among its members according to the rules stipulated in the operational plan. A community forest should be managed and its products utilized in such a way that there is no negative impact on the environment. CFUGs can sell their forest products to outsiders if there is a surplus after the requirements of group members have been met. They are authorized to fix the prices of forest products for sale to outsiders, but these prices cannot be lower than those fixed by the government. The forest land cannot be sold or used as collateral for loans.

CFUGs are responsible for protecting the community forests from encroachment. It is illegal to construct residential buildings, cause erosion and landslides through CFUG activities, quarry, collect stone or soil and catch or kill wildlife (Government of Nepal, 1993; 1995). Figure 3 presents a schematic depiction of the various stakeholders and their functions with regard to community forestry.

Leasehold forests

Forests are leased out: (a) to groups of poor families; (b) to industries or organizations; and (c) for ecotourism. Very little forest land is leased out for wood-based and ecotourism-related industries because of the long bureaucratic process involved and the low priority given to these activities in the forest policy (MPFS, 1989), the Forest Act and the Forest Regulation. Between the promulgation of the Leasehold Forestry Regulation in 1978 and August 2005, only 216 ha of forest was leased out to ecotourism and wood-based industries (Department of Forest, 2005). Most leasehold forests are handed over to groups of poor families.

A leasehold forest is handed over for a maximum of 40 years, which is extendable for another 40 years. As in community forestry, the operational plan provides the basis for forest protection and management and the exploitation and distribution of products among the leasehold group members. The operational plan for a leasehold forest is prepared by the leasehold group, with technical assistance and facilitation from the Forestry Ranger, the Livestock Junior Technician and/or local NGOs. The Forest Regulation exempts very poor families from paying lease fees, but others have to pay from 200 rupees (NR) to NR1 500, depending on the geographic region in which the forest is located. Fees are higher in the Terai and lower in the mountains. Organized bodies pay higher lease fees than industries or communities, and communities pay the lowest fees.²²

Leasehold groups are authorized to extract forest products, distribute them among the group members and sell surpluses to outsiders in accordance with provisions made in the operational plan. Leaseholders are responsible for protecting any surviving old and large trees²³ on the leased land, but these trees remain the property of the government. Leaseholders can transfer or sell their rights to others after they have successfully completed one-third of their lease period. They cannot, however, sell the leased land or pledge it as collateral for obtaining loans.

²² An organized body is an institution that is officially registered by law in the government organization. NGOs, private companies, etc. are organized bodies. In this case, a community is any ethnic or other group that does not fall under the poverty line.

²³ A tree is defined as a perennial plant with a self-supporting main stem or trunk of more than 30 cm diameter.

In leasehold forestry, conflicts have been observed during the identification and allocation of lease land, and over the leasehold forest itself. Before the leasehold land has been handed over, conflicts concern boundary claims between private and leasehold land, membership of the leasehold group, and the conflicting claims of better-off and poorer families. After the land has been handed over, the main sources of conflict are grazing rights and social issues. Leased land is a limited resource, and when local people see the benefits of leasehold forest, many non-leaseholding households want to join leasehold groups (Singh, 1995). Such conflicts have been resolved by local community consensus, mediation from forestry rangers, the formation of additional leasehold groups where there is high potential for leasehold forestry, and other means.

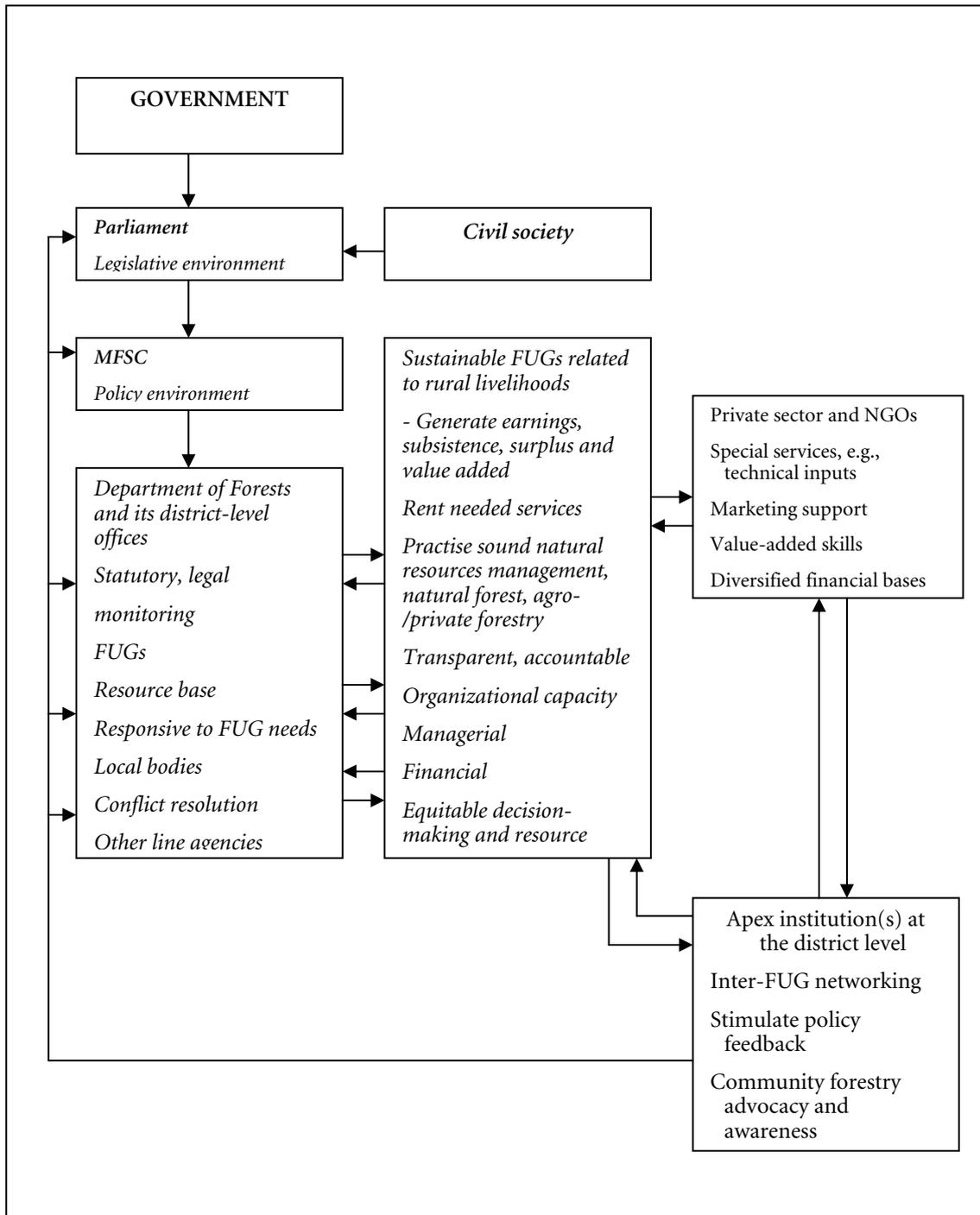
MANAGEMENT AGREEMENTS IN COMMUNITY AND LEASEHOLD FORESTRY

The legal basis for a community and or leasehold forest is a certificate issued by a forest agency. These certificates are contracts between the users and the government. A CFUG is first formally registered at the District Forest Office. It then prepares an operational plan for the community forest in a participatory manner among its members. The chairperson of the CFUG submits the operational plan for the approval of the District Forest Officer, who examines the documents and issues a certificate for the community forest. The chairperson signs a commitment letter stating that the CFUG will abide by the provisions made in the operational plan.

Leasehold groups, which are made up of five to 20 traditional users of the forest, follow a similar procedure. The main difference is that the District Forest Officer forwards the operational plan to the Regional Director of Forest,²⁴ who approves it and issues a certificate to the leasehold group for the leasehold forest. The District Forest Officer then prepares a lease commitment paper, which the chairperson of the leasehold group signs.

²⁴ There are five political and administrative regions in the country.

FIGURE 3
Stakeholders and their functions in community forestry



PLANNING AND MONITORING OF COMMUNITY AND LEASEHOLD FORESTS

The operational plan provides a broad framework for developing a detailed plan and monitoring system. Under these general guidelines, CFUG members carry out annual planning. Details of the annual plan and monitoring mechanism are worked out in advance at the monthly meetings of the Forest User Committee (FUC),²⁵ which is responsible for planning, implementing and monitoring progress in community forestry. The FUC's plan is then tabled at the CFUG's annual general assembly for approval. The CFUG is required to submit an annual progress report to the District Forest Officer describing the activities planned and achieved.

When an operational plan is being prepared or renewed, a ranger (a mid-level forestry technician) prepares an inventory of the forest stock in each block or compartment and over the whole community forest area. This inventory provides the basis for planning activities in the community forest. The range post (the lowest-level functionary in forestry administration) supervises forest planning at the ilaka²⁶ level, which is also where CFUGs present their annual plans. For administrative purposes in the forestry sector, a district is divided into one to three ilaka and has eight to 15 range posts. The ilaka-level plan is presented at the district planning workshop and subsequently at the regional planning workshop. The Department of Forest combines the outcomes of the district and regional planning workshops and submits the consolidated proposal to the Ministry of Forests and Soil Conservation and the National Planning Commission. The annual programme budget prepared by the Ministry of Finance, with recommendations from the National Planning Commission, obtains final approval from Parliament. Community forestry projects²⁷ are funded by donor agencies including the Danish International Development Agency (DANIDA), DFID, the Government of Australia, GTZ, the Swiss Development Cooperation (SDC) and the Cooperative for Assistance and Relief Everywhere (CARE) Nepal. Donor-funded projects provide technical and financial assistance for organizing the ilaka- and district-level planning workshops and meetings.

Leasehold groups adopt the same approach and process for planning at the range post/ilaka and district levels. Staff members from the District Livestock Services Office and NGOs/group promoters participate in the planning workshops. The leasehold forestry programme integrates forestry, livestock and microfinance organizations, whereas community forestry works solely with the forestry organization. Leasehold forestry programmes are presented separately at the regional-level forestry and livestock planning workshops. Forestry-related components of the annual programme are compiled at the Department of Forest and livestock components at the Department of Livestock Services. The departments then forward the programmes to their respective ministries, and they are finally approved by the National Planning Commission. The Ministry of Finance is responsible for allocating the budget, and the consolidated annual programme budget of all sectors is tabled in Parliament for approval in the form of the Appropriation Bill.

The FUC reviews progress in the community forest at its monthly meetings. The range post/ilaka forest office also monitors activities, including the extraction and distribution of forest products. Ultimately, the District Forest Office is responsible for the overall monitoring of all community forests in its district. Similarly, the Regional Director of Forest monitors all the community forests in its region on a sample basis. Donor-supported community forestry projects carry out more intensive monitoring because they have the necessary resources to pay their own staff and/or engage external consultants. Donor-supported projects also publish annual progress and monitoring reports.

The Community Forestry Division of the Department of Forest has a management information system section, which maintains records of community forests in the whole country, providing an overall picture of community forestry and information on individual districts. The Monitoring and Evaluation Division of the Ministry of Forests and Soil Conservation prepares guidelines and annual monitoring reports. In spite of its many layers and mechanisms, the monitoring system for community forestry is a weak and neglected component.

²⁵ The FUC is an executive committee of the CFUC. It is formed through election at the CFUG general assembly, and its tenure is normally fixed at two to three years.

²⁶ An ilaka is a territorial forest office under the District Forest Office. The ilaka forest office is headed by an assistant forest officer and administered by four range posts.

²⁷ Community forestry projects are funded by bilateral donors or international organizations for a limited period, such as three, five or ten years. Each project has its own working area or district, which is different from those of other projects.

All leasehold group members participate in monthly meetings where they review and monitor leasehold forestry activities. The leasehold group's activities are also monitored by the forestry ranger, the livestock junior technician/junior technical assistant and group promoters or social mobilizers at the field level. The District Coordination Committee (DCC) or District Forestry Coordination Committee (DFCC) monitors leasehold forestry programmes at the district level, while the project coordinator and livestock coordinator monitor the overall leasehold forestry programme at the project level.²⁸ A management information system is maintained at the project coordinator's office for the leasehold forestry programme throughout the country.

²⁸ Junior technicians/junior technical assistants are field-level livestock technicians based in the field offices who deliver livestock treatment services and facilitate the leasehold farmers through forage development. Group promoters are recruited by the Leasehold Forestry and Livestock Project Office. They are all women and selected from the leasehold group families. Group promoters receive intensive training in holding leasehold group meetings, collecting monthly saving, mobilizing community members and managing conflict. They work as messengers between leasehold groups and district forestry and livestock service offices. The DCC coordinates among line agencies at the district level and helps the smooth functioning of leasehold forestry activities. The committee members are people from the forestry and livestock sectors, representatives of the District Development Committee, women's development officers and district administration officers. DCCs are formed in the districts where leasehold forestry programmes have been launched. The DFCC is a new committee chaired by the chairperson of the District Development Committee, which is an elected body that coordinates the development activities of all the agencies operating in the district. Other members of the DFCC come from agriculture, livestock services, soil conservation, women's development, political parties, NGOs and the district administration office. The District Forest Officer serves as its secretary. The DFCC is a broader forum than the DCC; where they are formed, DFCCs therefore supersede DCCs. The main objectives of the DFCC is to coordinate forest development activities among stakeholders and to implement the forestry sector programme in a transparent and effective way.

Changes and trends in private, community and leasehold forestry

In 2005, the Department of Forest Research and Survey estimated the total area of forest in Nepal to be 3 635 500 ha, distributed in all ecological zones. Regarding species, the Terai has tropical and sub-tropical broadleaf forests of *Shorea robusta* and associates, whereas the mid-hills have broadleaf (*Castanopsis*, *Schima wallichii*) and chirpine (*Pinus roxburghii*) forests. The high Himalaya comprises temperate forest species including blue pine (*Pinus excelsa*, *Cedrus deodara*), oak (*Quercus* spp.), Arundonaria (thin bamboo) and junipers.

PRIVATE FORESTRY

The above estimate does not include the trees planted in privately owned land, which covers about 50 000 ha. Most of the trees in private forests are fodder or multipurpose species for domestic use. Between 1991/1992 and 2001/2002 the area under this form of tenure increased by about 16 percent, an impressive rate of growth considering the competing demands from alternative uses of privately owned land. According to Central Bureau of Statistics figures (CBS, 1993; 2004), about one-third of all landholdings contain planted trees. While the total area and the proportion of the total area of holdings devoted to tree planting increased, the proportion of households planting trees decreased from nearly 40 percent in 1991/1992 to about 30 percent in 2001/2002.

TABLE 2

Trends in tree planting on private land, 1991/1992 to 2001/2002

Description	1991/92	2001/02
Area under trees (ha)	44 087 ¹	50 972
Percentage of area devoted to tree planting	1.70	1.92
Percentage of landholdings planting trees	39.48	29.42

¹ The area under trees is calculated by dividing the total number of trees by the average number of trees per hectare reported for the year 2001/0202. This figure assumes that the number of trees per hectare in 1991/1992 was the same as in 2001/2002.

COMMUNITY FORESTRY

Of the 75 districts in Nepal, 74 have community forests – only one mountain district, Mustang, does not. Altogether, community forests cover 1 139 233 ha and are found in all ecological zones, including high mountains, mid-hills, Siwaliks, inner Terai and Terai.²⁹ Most community forests are natural, but human-made plantations have also been given to CFUGs. Some 83 percent of community forests are covered with forest, 14 percent with shrubs, 3 percent with plantations, and less than 1 percent with grass (Kanel, 2004).

Government-owned forests have been leased out in 31 districts, mostly in the mid-hills and some parts of the inner Terai. The total area of degraded forest land transferred as leasehold forests to groups of poor people is 8 507 ha. The condition of these forests has improved dramatically, and they have now been turned into secondary forests.

²⁹ The inner Terai region covers the valleys between the Mahabharat and Siwalik hills. Mahabharat is a wide range in the mid-hills, and Siwalik (also known as Churia hill) is the outermost Himalaya in Nepal. The plains located in the southern part of Nepal are referred to as the Terai.

TABLE 3
Areas under community and leasehold forests

Tenure type	Forest area	No. of districts covered	Ecozones
Community forests	1 139 233 ha	74	All
Leasehold forests	8 507 ha	31	Mid-hills and inner Terai

Sources: The management information systems of the Community Forestry Division for community forests, and of the Leasehold Forestry Programme for leasehold forests.

Enactment of the Private Forest Nationalization Act of 1957 marked the beginning of forest policy in Nepal. The act aimed to protect, manage and utilize national forests and promote public welfare. Earlier, during the Rana regime,³⁰ vast tracts of forests were under the private management of elite groups, including members of the royal families and their relatives. Despite its intended objective, the act became very unpopular with the public because it undermined the traditional rights of local communities to protect, manage and utilize local forest resources for their own sustenance. The policy therefore resulted in the destruction of vast tracts of valuable forest.

Under the Forest Policy of 1961, attempts were made to protect, manage and utilize forests for the improved economic welfare of the people and the country. The first Forest Act was promulgated and enforced in 1961. It concentrated on State ownership of and authority over forests, and all lands except agricultural land were to be treated as forest land. This encouraged the conversion of forest areas into agricultural land as a way of laying private claim to publicly owned lands. The rate of deforestation accelerated, and national forest cover had declined from 51 to 45.6 percent by 1964.

According to the Forest Protection (Special Arrangement) Act of 1967 all forest offences, including forest encroachment, were treated as State crimes. The District Forest Officer was authorized to seize all goods and equipment and put offenders in jail. The officers tried to enforce the act, but deforestation was not reduced. In 1976, the National Planning Commission formulated the National Forest Policy with the objective of maintaining and restoring ecological balance through reforestation and watershed management programmes. However, problems of encroachment and deforestation were not properly addressed, and forest area continued to decline from 45.6 percent in 1964 to 35.7 percent in 1977.

In response to the substantial loss in forest area, the Panchayat Forest (PF) and Panchayat-Protected Forest (PPF) Regulations of 1978 were promulgated, devolving forest management responsibility to local bodies. The village Panchayat was the lowest political and administrative unit. Degraded national forests were handed over to the village Panchayats for either plantation or protection and management. These provisions involved the lowest political body in planning and decision-making processes, but did not include the participation of traditional users, who had a direct stake and concern in the PFs and PPFs. Thus, the regulations did not address the issues of field-level users. This led to a new wave of conflict among local users, local politicians and the forestry establishment (which often harassed local people under the pretext of mismanagement).

The Master Plan for the Forestry Sector (MPFS), prepared in 1988 and approved by the government in 1989, addressed many of these issues and provided a basic framework for the forestry sector. The MPFS classifies Nepal's forests into six categories, one of which is community forest. One of the plan's priority areas is local community participation in the management of community forests.

Following the restoration of democracy³¹ in 1990, the CFUG concept emerged formally in 1991, when a Community Forest Policy was issued. This policy is widely recognized as an excellent example of local empowerment and the involvement of users in forest resource management (Joshi and Pokharel, 1998). Its key directives are: (a) the handover of all accessible forests to traditional users as community forests; (b) the priority of community forests over other kinds of forest ownership; (c) District Forest Offices' authorization to hand over community forests; (d) the

³⁰ The oligarchic Rana family ruled Nepal for 104 years, until February 1951.

³¹ The King of Nepal banned the multiparty system in 1961 and enforced the partyless Panchayat political system on 31 December 1964. The Panchayat system was overthrown by people's movements in 1990, when democracy and the multiparty system were restored.

formation of CFUGs to protect, manage and utilize the community forests according to the provisions made in the operational plan approved by the District Forest Office; (e) CFUGs' authorization to fix the price of forest products; and (f) CFUGs' authorization to utilize surplus funds for any kind of community development work. Based on the MPFS, the Forest Act of 1993 and the Forest Regulation of 1995 provide a legal basis for the implementation of forest policy.

The handing over of community forests accelerated rapidly during the 1990s, but gradually declined in later years. This was mainly because most of the accessible forests in the hills and mountains had already been handed over, but also because the government had restricted the handing over of large tracts of forest in the Terai. Government policy is to manage larger forests in the Terai under the Collaborative Forest Management Programme. In accordance with provisions in the Forest Policy of 2000, only scattered and disjointed patches of forest are handed over as community forests in the Terai.

Before a community forest is handed over, the CFUG concerned is required to prepare a forest inventory quantifying the growing stock of the standing forest and the allowable cut. This is technical and time-consuming work, which most CFUGs cannot do by themselves. However, neither can they afford to pay an outside technician to carry out the inventory for them; the job is usually done by a mid-level forestry technician. This is one of the factors that has delayed the handing over process and the renewal of old community forest. It also has a direct negative impact on the harvesting, extraction and sale of forest products, which ultimately affects the community development and poverty alleviation activities of CFUGs. Recently, the Danish Government withdrew its funding of community forestry development in 38 districts; other donors, including the Australian Agency for International Development (AusAid), the United States, GTZ and SDC, have gradually reduced their community forestry programmes until the current situation of conflict³² in the country improves. Annex 4 shows how the trend in handing over community forests increased from 1988 to 1996 and gradually slowed down thereafter.

TABLE 4
Evolution of community forestry in Nepalese legislation

	Regulations 1978	Amendment 1979	Amendment 1987	Regulations 1995
Community forest area	PF not more than 125 ha; PPF not more than 250 ha	PF not more than 125 ha; PPF not more than 250 ha	No limit	No limit
Rate of benefit return to the community (%)	40%	75%	100%	100%
Use of community funds	50% for forestry	50% for forestry	100% for forestry	Forestry; surplus for community development
Pricing of products	Not less than government rates	Not less than government rates	Not less than government rates	As per CFUG decision
Plan prepared by	District Forest Office	District Forest Office	Community	Community
Plan approved by	Conservator	Conservator	Regional Director (Conservator)	District Forest Office
Community forest boundary	Administrative	Administrative	Administrative	Defined by use practices
Management responsibility	Panchayat	Panchayat	User committee under Panchayat	CFUG
Chairperson	Elected leader of Panchayat	Elected leader of Panchayat	Nominated by Panchayat	Selected by CFUG assembly

Source: ICIMOD quoted in McDougall, 2002.

³² Nepal has been facing serious security problems in its interior for the past decade owing to violent conflict between Maoist rebels and the government. About 14 000 people have lost their lives to this problem.

LEASEHOLD FORESTRY

The Leasehold Forest Regulation was promulgated in 1978 at the same time as the PF and PPF were introduced. However, leasehold forestry was not effectively implemented in the field until 1993. The Leasehold Forestry and Forage Development Project, which started in 1993, was the first project to implement leasehold forestry for the poor. It was first piloted in four districts and gradually extended to ten districts from 1993 to 2001. The National Planning Commission considered leasehold forestry to be an effective and tested model for poverty alleviation and environmental conservation. It expressed its strong commitment to this programme for the poor and categorized it under Priority I in the Tenth Five-Year Plan.³³ Later, during 2002/2004, the project was extended to cover 26 districts with funding from government resources and no additional support from outside donors. The Forest Act and Forest Regulation also provided a legal framework for the promotion of leasehold forestry. In 2002, the Ministry of Forests and Soil Conservation brought out the Leasehold Forestry Policy to support the poor and promote forest-based industries and ecotourism. As a result, the leasehold forestry concept was included in the Western Upland Poverty Alleviation Project,³⁴ which has been implemented since 2002 for poverty alleviation in the most remote districts of the Karnali zone – Humla, Jumla, Bajhang and Bajura. Initiated in four districts more than 11 years ago, the Leasehold Forestry Programme is now being implemented in 11 districts, and the government has signed an agreement with IFAD for implementation of the programme's second phase in 22 districts for a period of eight years starting in July 2005. Throughout Nepal, an estimated 900 000 ha of shrub- and other appropriate land is available for leasing to about the same number of households (Yadav and Dhakal, 2000).

The handing over of leasehold forests to the poor followed an increasing trend from its beginnings in 1993 up to 2000, but the pace slowed when funding from IFAD ceased. Currently, the Western Upland Poverty Alleviation Project and the Leasehold Forestry and Livestock Project are being implemented in 30 districts, and the pace of handing over leasehold forests has picked up again. NGOs have been heavily involved in identifying and mapping potential lease land, facilitating leasehold groups' preparation of operational plans, forming and strengthening groups, and developing capacity. In hill and mountain zones, the Department of Forests is the *de jure* authority for administering all degraded and shrublands, but local communities, as customary users, continue to use these lands for grazing, the extraction of forest products and the holding of social and cultural events. The allocation of community or leasehold forestry is therefore basically determined by the local community or users of forest land.

Protecting leasehold forest from grazing and forest fire invigorates the natural regeneration of local grasses and tree species. The leasehold groups manage their forests by clearing unwanted grasses and shrubs, thinning thick stands (poles and saplings), pruning branches, and singling stems.

At two monitored sites in Makwanpur and Kavreplanchok districts, the numbers of plant species increased by 57 and 86 percent, respectively, between 1984 and 2000; the numbers of trees and tree species also increased substantially (IFAD, 2003). Field data were gathered from two sites – one at Chitrepani in Makwanpur district, and the other at Bhagwatisthan in Kavre district – in 1994/1995 and 2000. One of the most significant measurable differences in vegetation between 1994/1995 and 2000 was a massive increase in species diversity. In Chitrepani, plant diversity in the leasehold forest (9 ha) increased from 37 species in 1994 to 58 in 2000, an increase of 57 percent. In Bhagwatisthan leasehold forest (78 ha), it increased from 70 species in 1995 to 130 in 2000, an increase of 86 percent (FAO, 2000a).

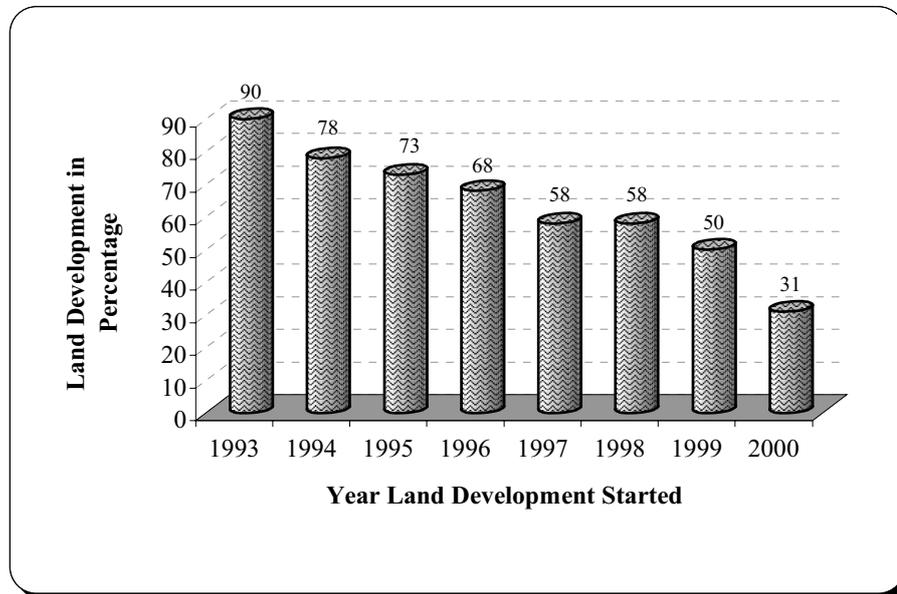
In newly formed leasehold forests, an average of only 32 percent of the ground was found to be covered by vegetation; this steadily increased to 50 percent in one of the two-year-old forests, 68 percent in the four-to-five-year-old forests, and 78 percent in the six-to-seven-year-old forests

³³ The National Planning Commission uses a scoring system to rank development projects into three orders of priority – I, II and III. The performance of Priority I projects and programmes is more intensively monitored at the higher level. The Five-Year Plan sets out national and sectoral strategies and priorities, as well as physical targets, under various programmes. The current (Tenth) Five-Year Plan covers the period 2002 to 2007.

³⁴ This is a poverty alleviation project, which was launched in remote districts of Nepal with technical and financial assistance from IFAD. Leasehold forestry development is one of its main components, and seeks to provide poor households – the project's main target group – with access to and control over forest resources.

(Singh and Shrestha, 2000). The project impact study records that 84 percent of project households reported fewer months of scarcity of animal feed, even though they were keeping increasing numbers of large livestock (FAO, 2000b).

FIGURE 4
Vegetation cover in leasehold forests, 1993 to 2000



Management and tenure systems in community and leasehold forestry

COMMUNITY FORESTRY

Forest management in community forests

Initially, community forest management was oriented towards the production of timber, fuelwood and tree fodder from plantations of pine and other species. Later, the strategy changed to the management of natural regeneration. Most community forests are protection-oriented, but thinning, pruning, singling and the removal of dead and fallen trees are common practices. A selection system³⁵ is therefore used in the management of community forests, and there is little intensive forest management. Most community forests have high potential for non-timber forest products (NTFPs), and the conservation and cultivation of NTFPs has recently been introduced in some forests. However, fuelwood, timber and fodder are still the prime products extracted from community-managed forests.

The Livelihoods and Forestry Programme³⁶ carried out a baseline survey in 2003 and found that forest conditions were improving, according to 93 percent of respondents in the western and 72 percent in the eastern districts, and that CFUG members believed that managing community forests is a worthwhile endeavour. This programme covers four districts in the eastern development region, three in the western and eight in the mid-western. Branney and Yadav (1998) assessed the change in forest conditions and management in community forests between 1994 and 1997 in four eastern hill districts and found an overall improvement in community forest conditions: the total number of stems per unit area increased by 51 percent, even though the basal area of forest in poor condition increased by a significant 29 percent. In a study on land-use change, Jackson *et al.* (1998) found that shrub- and grassland had been converted into more productive categories of forest land, reflecting the care that communities take in managing and conserving their forest resources.

Livelihoods in community forestry

Livelihood improvement for poor households through the community forestry programme is a new concept. Some community forestry projects started this on a pilot basis and have observed very positive results. The Fourth National Community Forestry Workshop (2004) identified livelihoods as one of the key issues that should be integrated with forestry policy, laws and programmes.

Capacity in community forestry

The Strategy for Community Forestry (1992) included the following elements: (a) phased handover of all accessible hill forest areas to communities, as long as they are able and willing to manage them; (b) formulation and implementation of simple operational plans; and (c) retraining of forestry staff for their new roles as advisers and extensionists. Accordingly, the management responsibility for community forests was transferred to the CFUGs. The field staff (rangers, assistant forest officers and district forest officers) provide advice, technical assistance and support to the CFUGs, but final decisions are made by the groups themselves. District forest officials (including forestry rangers), NGOs and project officials have received rigorous training on participatory forest management, training methodology (training of trainers), facilitation methodology, and tools for rapid and

³⁵ The selection system in forest management involves removing old, selected, identified or marked trees from the forest at specified intervals. At the same time, smaller trees are thinned out to provide light and space for seedlings to emerge and poles to grow. The main objective of the selection system is to keep the forest in a condition of continuous regeneration and growth.

³⁶ With technical and financial assistance from DFID, this programme launched the first community forestry programme initiated in Nepal since 2001. It seeks to improve livelihoods through forestry.

participatory rural appraisal; they have also made extensive visits to learn from other community forests. Trained staff from the District Forest Office and local NGOs train the CFUGs to enhance their capacity to manage their groups and forests in a sustainable manner. A cadre of local resource people has been selected from among innovative and active members of the CFUGs. These local resource people have received intensive training and now provide training and facilitation for other community forests.

The Community Forestry Division and community forestry projects/programmes supported by funding agencies have developed and published community forestry guidelines, leaflets, manuals, training course curricula, handbooks, extension materials, radio programmes, and other audiovisual and printed materials. The division tries to maintain uniformity by adopting the same processes all over the country. Thus the community forestry programme is best implemented when a forestry staff member from one district is transferred to another so that the same process can be followed in all districts. The capacity of district forest offices, NGOs involved in the programme and CFUGs has been enhanced through rigorous training courses and visits.

CFUGs are federated at the district, regional and national levels. The national-level organizations are FECOFUN and NEFUG, each of which has a national network that works as a pressure group and provides capacity building to the CFUGs. As well as the central Training Division in Kathmandu, regional training centres have been established in all five development regions. The division and centres train mid-level technicians (mainly rangers) and officers; most training courses focus on community forestry.

Most studies and research in the forestry sector focus on aspects of community forestry. They are conducted by university students pursuing academic degrees (B.Sc., M.Sc. and Ph.D.), community forestry projects and scholars and professionals from various countries, and provide valuable analytical insights into various community forestry issues and measures for improving the programme's effectiveness.

LEASEHOLD FORESTRY

Forest management in leasehold forests

In leasehold forestry, leasehold groups at first emphasize protection measures such as warding off grazing animals and forest fires. Forestry and livestock officials provide technical inputs and support for this; the protection helps to invigorate the natural regeneration of local grass and tree species. After the third year, leasehold groups start to carry out prescribed improvement activities, including clearing weed species, thinning by removing stems to maintain equal distances, removing dead, dying and diseased trees, and pruning branches.

In the second phase, leasehold groups start to sow or plant perennial forage species (such as stylo, molasses, broom grass and Napier grass) in vacant areas. Multipurpose and fodder tree species are planted on the lease land, and these can provide group members with short-, medium- and long-term income and benefits. The trees planted include fruit-bearing species that have market value (*Choerospondias axillaris*, *Juglans regia* and *Bassia butyraceae*). Pineapple, banana, ginger, turmeric and NTFPs are intercropped for medium-term benefits. In these early stages, the leasehold group members make substantial investments of labour and inputs. Forests are intensively managed by utilizing both horizontal and vertical spaces to reap optimum production and income benefits. Agroforestry with the planting of forage crops is commonly practised on the leased land, but the cultivation of cereal crops is not allowed. All forest management measures are adopted through the unanimous decisions of leasehold group members, with technical advice and inputs (planting materials, seeds, training) from the district forest and livestock services offices.

Livelihoods in leasehold forestry

Most leasehold group members are marginal or small farmer³⁷ families, whose own food production is enough to feed their families for only up to six months a year. The leasehold forestry programme therefore aims to diversify the income sources of leasehold group members through the use of the

³⁷ Farmers with less than 0.5 ha of agricultural land and per capita income of less than US\$80 are considered small farmers.

leased land and/or off-farm income-generating activities. A household survey showed that the period of household food deficiency among leasehold group members decreased (FAO, 2000b). The leased land has become a good source of income for many poor households, who can now send their children to school as a result. After becoming leasehold group members, many households have started small enterprises, such as keeping goats, selling milk, providing veterinary services and selling veterinary products, beekeeping, vegetable farming and selling fruits and forage seeds (Singh and Shrestha, 2000). Leasehold groups have developed their own savings mechanisms and cooperatives from which they can obtain loans; this has drastically reduced their dependence on local moneylenders who charge exorbitantly high interest rates. Long-term land tenure provides leasehold groups with a strong incentive to invest labour and inputs for short- and long-term crops on the leased land, thus providing an opportunity to improve their livelihoods.

Capacity in leasehold forestry

The first part of the Leasehold Forestry Project (1993 to 2003) was implemented for four years as an exploratory stage; this was followed by a six-year development period. Based on the lessons learned from this first phase, the project has been continued into a second phase spanning the period from 2005 to 2012. In the three districts of Makwanpur, Dhading and Tanahu, leasehold groups have gradually been federated into multipurpose cooperatives for long-term sustainability, but the federation process is a long one. At present, the project receives back-up support from two agencies: the Leasehold Forestry Section (unit) of the National Forest Division of the Department of Forest; and Western Upland Poverty Alleviation Project. Operational guidelines, training and workshop manuals and handbooks have been prepared.

Learning from the lessons of the first phase, leasehold groups have been joined into clusters of five to 15 groups, each covering at least 70 households. In 2005, the leasehold forestry project was converted into a programme,³⁸ which started in four districts and has now been extended to 30. District forest and livestock services officials and other stakeholders have become more familiar with the leasehold forestry concept and implementation procedures. Separate leasehold forestry policy, laws and programmes have been formulated, and the National Planning Commission and Ministry of Forests and Soil Conservation, including its Department of Forest, are committed to implementing these as a priority.

Leasehold forestry policy and legislation

The Forest Act of 1993 and the Forest Regulation of 1995 accord community forestry priority over leasehold forestry. Potential forest land is identified and a 35-day legal notice served to the local community soliciting their interest in accepting the identified patch of forest as a community forest. This patch can then be given out as leasehold forest only if the local community does not respond by submitting an application for community forestry.

The District Forest Officer is legally authorized to hand over virgin or productive and dense forest as community forest without discrimination regarding the socio-economic condition of the local community. There is no limit on the forest area that can be handed over, and community forests range from small patches to more than 5 000 ha. On the other hand, only small patches – usually of between 5 and 10 ha – of degraded forest or shrubland are leased out to groups of poor families; the Regional Director of Forest has to approve the leasing out, which involves a long bureaucratic process.

It should be noted that there is not yet any government policy or programme to implement leasehold and community forestry in a complementary manner. The Tenth Five-Year Plan states that leasehold forests can be implemented independently or within community forests, but guidelines for this have not yet been developed.

³⁸ Project activities are implemented for fixed periods, but a programme continues as part of regular government activities. For example, the Hills Lease Forestry and Forage Development Project was implemented for eight years, until its status was changed to programme so it could continue as a regular government programme. During a project, development activities are carried out intensively and resources are provided to engage national and international experts on contracts.

In order to obtain forest land on lease, an aspiring group has to submit a financial feasibility report. This is a demanding condition for the poor people concerned, and the forestry ranger usually helps them to meet the legal requirements.

CFUGs are legally registered at the District Forest Office, but the legal registration of leasehold groups is not stipulated in the Forest Act or Leasehold Regulation. In the first phase of the Leasehold Forestry Project, groups were registered with the Small Farmers Development Project (SFDP) of the Agricultural Development Bank, but this was legally questionable. SFDP is no longer an authorized line agency for the second phase of the project or for the Western Upland Poverty Alleviation Project.³⁹ The legal status of leasehold groups is therefore unclear. However, leasehold group cooperatives are legal entities that are officially registered at the District Cooperative Office.

In interviews, government officials and field forestry staff mentioned that they are positive towards the community and leasehold forestry programmes because both are successful. However, while leasehold forestry addresses poverty directly, this is not so clear in community forestry. Officials perceive that the two programmes could complement each other.

GOVERNMENT POLICY AND LEGAL ISSUES RELATED TO COMMUNITY AND LEASEHOLD FORESTRY

Table 5 summarizes the policy and legal issues in community and leasehold forestry.

³⁹ In the first phase of the Leasehold Forestry Project four agencies – the Department of Forest, the Department of Livestock Services, SFDP and the Nepal Agricultural Research Council – worked together and were regarded as line agencies for the project. In the second phase, only the first two are recognized as line agencies.

TABLE 5
Policy and legal issues in community and leasehold forestry

S.N.	Community forestry	Leasehold forestry	Government-managed forestry, administered by the District Forest Office
1	The basic objectives are: a. meeting the bona fide needs for forest products of the people living near forest areas; b. managing good forest areas with a view to sustaining the supply of forest products. Degraded areas can be part of a community forest, but as long as there is a choice, they are seldom accepted, and currently account for less than 5% of community forests (Kanel, 2004). Communities select the best option.	The basic objectives are: a. poverty alleviation for the poor households living close to degraded forest areas; b. ecorestoration of degraded forest areas.	The objective is not explicitly expressed, but the general perception is that it is to fulfil the forest product needs of people in general.
2	Includes everyone living near forest areas, irrespective of their economic, social or ethnic status. There are no targeting criteria to address poverty.	Targets poor people living near forest areas, including disadvantaged ethnic groups.	The target group is not spelled out.
3	CFUGs are comparatively large and heterogeneous.	Leasehold groups are small and homogeneous.	There is no group approach.
4	The approach aims mainly to manage existing forests. It is a preventive measure against the degradation of forest through regulating the harvest of forest products and controlling grazing, forest fires, etc.	The approach pays more attention to natural resource management. It tries to correct past mismanagement by rehabilitating and restoring degraded forest areas.	Covers forest areas other than community, leasehold and other forest for specific purposes. A forest management scheme is prepared for harvesting specified amounts of forest products each year.
5.	Forest products are available to beneficiaries only at specified times of the year. For example, fodder collection may be allowed only during certain periods.	Forest products are available to beneficiaries throughout the year (as determined by them).	Forest products are available for all the citizens of the district; surplus products are sold at auction.
6	Manages forests on the basis of operational plans; the benefits must be shared with the whole community.	Manages forests on the basis of operational plans; the benefits flow directly to beneficiaries.	Manages forest according to the forest management scheme; really consists only of gathering fallen trees.
7	CFUG members have little incentive or interest in implementing the operational plan. An individual member can get fuelwood, fodder and timber for subsistence at fixed prices, but cannot use the revenue generated from the forest, which is normally spent for community development. Individual households therefore have less interest in the forest.	The concept encourages environmental restoration and protection by giving beneficiaries an incentive to implement the operational plan. There are close linkages between the benefits obtainable and the ecorestoration of degraded leasehold areas.	There are no incentives, other than the District Forest Office's responsibility; forests are therefore degrading.
8	Community forestry is not legally mandated to alleviate poverty, but forest conditions have been considerably improved in these forests.	Leasehold forestry prescribes a unique mechanism in which poor and resource-scarce people are involved in conserving the forest and harnessing the benefits from it.	Limited amounts of timber from government-managed forests are available to victims of natural calamities at subsidized rates. Other households can obtain limited amounts for house construction and agricultural tools. But the sale and distribution of forest products through the District Forest Product Supply Committee are not effective, and people are not getting timber easily.

9	Most forests are handed over for 5 years, extendable indefinitely for periods of 5 to 10 years if they perform satisfactorily. There is no specified time limit for reverting community forests back to the government.	Degraded forests are leased out for a maximum of 40 years, which can be renewed for another 40 years.	Forests are directly administered by the District Forest Office, with no people's participation.
10	In the hills, there is no need to share the benefits from the forest with the government. In the Terai and Inner Terai, 15% of the benefits from forest product sales – mainly of sal (<i>Shorea robusta</i>) and khair (<i>Acacia catechu</i>) – to non-members is paid to the government.	Poor families are exempt from leasing fees. They do not need to share the benefits with the government.	15% of revenues collected from forests are shared with the local government District Development Committee; the remaining 85% go into government funds.
11	CFUG members maintain a feeling of "our" community forest.	There is a strong feeling of "my" forest among the leasehold group members. This sense of ownership is the principal driving force in managing the forest.	As it can be managed as common property, forest is often treated as an open-access resource; hence the "tragedy of the commons" applies. There is no feeling of ownership among the local communities.
12	Forest is protected and forest products are collected.	Forest is intensively managed, accompanied by intercropping with perennial forage species.	Forest is protected by the District Forest Office staff.
13	Fuelwood and timber are the main products, but NTFPs are also gathered.	Forage and NTFPs are the main products.	Timber is the main product, but NTFPs are also collected.
14	Only the forestry organization is involved.	This is an integrated approach that involves the forestry, livestock and cooperative sectors.	Only the District Forest Office is involved in protection.

Notes: * Through a notice in the official Nepal Gazette of 12 February 2001, the government completely banned the collection, utilization, sale, transport and export to other countries of two medicinal and aromatic plant species: panch aunle (*Dactylorhiza natagirea*) and bark of Okhar (*Juglans regia*).

** A policy provides a broader framework, but for implementation it is necessary to formulate an act, regulation and periodic and annual programmes. For example, the Leasehold Forest Policy (2002) is not included in the Forest Act (1993) and Forest Regulation (1995), so it cannot be implemented effectively in the field.

Effectiveness of different forest tenure systems

Community forestry aims to fulfil basic forest product needs, whereas the main objective of leasehold forestry is poverty alleviation and rehabilitation of degraded forest lands (environment conservation). The coverage of community forestry is much larger in terms of both forest area and population, but it is not directly focused on poverty reduction. Leasehold forestry has smaller coverage, but has a very positive impact on poverty alleviation, as well as improving degraded forest lands owing to the stronger sense of ownership among users.

COMPARISON OF COMMUNITY, LEASEHOLD AND GOVERNMENT-MANAGED FOREST

Table 6 compares community, leasehold and government-managed forestry (UNOPS, 2001).

TABLE 6
Comparison of leasehold, community and government-managed forestry

S.N.	Community forestry	Leasehold forestry	Government-managed forestry, administered by the District Forest Office
1	The basic objectives are: a. meeting the bona fide needs for forest products of the people living near forest areas; b. managing good forest areas with a view to sustaining the supply of forest products. Degraded areas can be part of a community forest, but as long as there is a choice, they are seldom accepted, and currently account for less than 5% of community forests (Kanel, 2004). Communities select the best option.	The basic objectives are: a. poverty alleviation for the poor households living close to degraded forest areas; b. eco restoration of degraded forest areas.	The objective is not explicitly expressed, but the general perception is that it is to fulfil the forest product needs of people in general.
2	Includes everyone living near forest areas, irrespective of their economic, social or ethnic status. There are no targeting criteria to address poverty.	Targets poor people living near forest areas, including disadvantaged ethnic groups.	The target group is not spelled out.
3	CFUGs are comparatively large and heterogeneous.	Leasehold groups are small and homogeneous.	There is no group approach.
4	The approach aims mainly to manage existing forests. It is a preventive measure against the degradation of forest through regulating the harvest of forest products and controlling grazing, forest fires, etc.	The approach pays more attention to natural resource management. It tries to correct past mismanagement by rehabilitating and restoring degraded forest areas.	Covers forest areas other than community, leasehold and other forest for specific purposes. A forest management scheme is prepared for harvesting specified amounts of forest products each year.
5.	Forest products are available to beneficiaries only at specified times of the year. For example, fodder collection may be allowed only during certain periods.	Forest products are available to beneficiaries throughout the year (as determined by them).	Forest products are available for all the citizens of the district; surplus products are sold at auction.
6	Manages forests on the basis of operational plans; the benefits must be shared with the whole community.	Manages forests on the basis of operational plans; the benefits flow directly to beneficiaries.	Manages forest according to the forest management scheme; really consists only of gathering fallen trees.

7	CFUG members have little incentive or interest in implementing the operational plan. An individual member can get fuelwood, fodder and timber for subsistence at fixed prices, but cannot use the revenue generated from the forest, which is normally spent for community development. Individual households therefore have less interest in the forest.	The concept encourages environmental restoration and protection by giving beneficiaries an incentive to implement the operational plan. There are close linkages between the benefits obtainable and the ecorestoration of degraded leasehold areas.	There are no incentives, other than the District Forest Office's responsibility; forests are therefore degrading.
8	Community forestry is not legally mandated to alleviate poverty, but forest conditions have been considerably improved in these forests.	Leasehold forestry prescribes a unique mechanism in which poor and resource-scarce people are involved in conserving the forest and harnessing the benefits from it.	Limited amounts of timber from government-managed forests are available to victims of natural calamities at subsidized rates. Other households can obtain limited amounts for house construction and agricultural tools. But the sale and distribution of forest products through the District Forest Product Supply Committee are not effective, and people are not getting timber easily.
9	Most forests are handed over for 5 years, extendable indefinitely for periods of 5 to 10 years if they perform satisfactorily. There is no specified time limit for reverting community forests back to the government.	Degraded forests are leased out for a maximum of 40 years, which can be renewed for another 40 years.	Forests are directly administered by the District Forest Office, with no people's participation.
10	In the hills, there is no need to share the benefits from the forest with the government. In the Terai and Inner Terai, 15% of the benefits from forest product sales – mainly of sal (<i>Shorea robusta</i>) and khair (<i>Acacia catechu</i>) – to non-members is paid to the government.	Poor families are exempt from leasing fees. They do not need to share the benefits with the government.	15% of revenues collected from forests are shared with the local government District Development Committee; the remaining 85% go into government funds.
11	CFUG members maintain a feeling of "our" community forest.	There is a strong feeling of "my" forest among the leasehold group members. This sense of ownership is the principal driving force in managing the forest.	As it can be managed as common property, forest is often treated as an open-access resource; hence the "tragedy of the commons" applies. There is no feeling of ownership among the local communities.
12	Forest is protected and forest products are collected.	Forest is intensively managed, accompanied by intercropping with perennial forage species.	Forest is protected by the District Forest Office staff.
13	Fuelwood and timber are the main products, but NTFPs are also gathered.	Forage and NTFPs are the main products.	Timber is the main product, but NTFPs are also collected.
14	Only the forestry organization is involved.	This is an integrated approach that involves the forestry, livestock and cooperative sectors.	Only the District Forest Office is involved in protection.

Proposals for the way forward

One of the major policy and legal constraints to the expansion of private forestry is the fixation of a land ceiling in the Lands Act of 1964. The purpose of the act was to ensure some degree of equity in the ownership of land, which is the principal source of livelihood and income for most of Nepal's population. This policy objective makes it difficult to argue in favour of waiving the ceiling.

ADAPTING POLICIES AND LEGISLATION IN COMMUNITY FORESTRY

Social equity and poverty alleviation should be an ultimate goal of community forestry. The following second-generation issues for community forestry have been identified (Kanel, 2004):

- governance,
- livelihoods, and
- sustainable forest management.

The Ministry of Forests and Soil Conservation should formulate a policy to address these issues, and reflect this policy in legislation for its effective implementation in the field. This implies that forestry legislation (the Forest Act of 1993 and the Forest Regulation of 1995) needs to be amended to make it explicitly pro-poor.⁴⁰

In some Terai districts, the Ministry of Forests and Soil Conservation has adopted a multi-stakeholder approach by forming District Forestry Coordination Committees (DFCCs) chaired by the chairperson of the District Development Committee. Other members of the DFCC are the district soil conservation, livestock, agriculture and women's development officers, and representatives of NGOs, wood-based industries and political parties in the House of Representatives. The District Forest Officer is the *ex-officio* secretary of the DFCC. The main objective of the DFCC is to make all forestry sector programmes transparent for all stakeholders in the district. The DFCC concept should be adopted in all districts.

Community forests in the Terai, the hills and the high mountains contain large quantities of many NTFPs, including high-value medicinal and aromatic plants (Luitel *et al.*, 2004). These are collected from wild forests only, are exported and serve as sources of additional income for poor people. Proper conservation and cultivation of NTFPs is sporadic. The Ministry of Forests and Soil Conservation has recently published the NTFP Policy and Strategy (2005), and all community, leasehold and other forestry programmes should incorporate the large-scale cultivation of NTFPs, including medicinal and aromatic plants, to create short- and medium-term employment opportunities and income for poor people.

Enterprise and marketing aspects of forest products are a weak component in community forestry. The transformation of forest products into semi- or fully processed materials and goods is also very limited, even though such products have huge potential. The community forestry programme should adopt a policy to promote pro-poor enterprises with marketing support.

Leasehold forestry is a successful model for addressing poverty and the conservation and management of degraded forest resources. It gives the poor long-term tenurial ownership, encouraging them to invest their labour to reap greater benefits. Some community forests have adopted a similar concept on a pilot basis within their forest areas, and this has been found effective for poverty alleviation. The concept should therefore be adopted in all community forests.

In community forestry, elite groups who hold the key posts on executive committees obtain most of the benefits and opportunities. It is unlikely that all users – especially the poor, disadvantaged

⁴⁰ "Pro-poor" means that interventions are positively biased in favour of the poor.

groups and women – are able to participate actively, particularly in decision-making and benefit sharing; sometimes, it would be more accurate to refer to “committee forestry” rather than community forestry. It is therefore recommended that community forestry adopt a policy of positive discrimination; policy and legal provisions should be made that earmark programmes and budgets for the poor.

In the Terai, all forests are located in the northern parts of the districts, while most of the population live in the southern areas. Only the communities adjoining forests – many of which settled there through migration – are considered to be the users and beneficiaries of community forests. Most traditional users who live some distance away from the forests are excluded from their conservation and management, and do not obtain any forest products or benefits. Surplus products from the community forests are sold through auction. Neighbouring communities or village development committees in the district cannot compete with timber contractors. Thus the government should adopt a policy and formulate legislation to enable the participation of traditional and distant⁴¹ users of community forests in the Terai. The needs of local people should be given priority over those of timber contractors who export forest products outside the district.

The range of the outer Himalaya is lower in altitude, ranging from 100 to 1 500 m above sea level. This area is called the Siwaliks and is fragile in structure, with loose gravel, conglomerates and coarse sand. Community forests with local participation are vital to conservation of the Siwaliks, and conservation-oriented forest management should be adopted in the community forests of this area. The removal of green trees and the carrying out of activities that disturb the soil should be completely banned, and perennial NTFPs should be promoted as sources of income for poor families.

Most community forests are protection-oriented, with simple thinning, pruning and singling. In order to get optimum benefits, intensive forest management practices should be adopted in the Terai, including the cultivation of NTFPs and forage farming.

LEASEHOLD FORESTRY POLICY

Although the leasehold forestry programme is effective for poverty alleviation and the rehabilitation of degraded forest lands with the active participation of poor people, it still covers only 8 500 ha in only 30 districts after a decade of implementation. It is thus time to extend the concept of leasehold forestry to all districts and more community forests. The government should allocate sufficient budget for this.

The concept of cooperatives as the apex-level bodies of leasehold groups has been implemented in the three districts of Makwanpur, Tanahu and Dhading. Cooperatives provide the leasehold groups with long-term institutional and financial sustainability, and have also resolved many conflicts. The cooperative concept should therefore be adopted more widely to cover all leasehold groups. In the longer-term, the cooperatives should form district- and national-level associations.

The Forest Act and Forest Regulation do not yet authorize District Forest Offices to hand over leasehold forests to groups of poor families; The necessary amendments to the act have not been made because Parliament has been absent. At present, the Regional Director of Forest approves lease certificates, but this is a time-consuming bureaucratic process. Authority for leasehold forests should be devolved to the District Forest Office, as is already the case for community forests.

Leasehold and community forests should not be regarded as competing with each other. They should rather be treated as complementary in order to obtain more benefits for the rural poor; the government should adopt a policy to make this happen.

Past experience shows that when only a few leasehold groups are formed in an area, they are easily suppressed by local elite groups. Leasehold forestry should adopt a cluster approach so that all leasehold groups can be included in cooperatives. It will be easier and cheaper to deliver services and inputs to such clusters, and clusters of five to 15 groups, representing at least 70 households each, will facilitate the bulk production and marketing of products.

⁴¹ These are forest users who live some distance from the forest and are not included in the CFUG.

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ANNEX 1: FARM HOUSEHOLDS PLANTING FOREST TREES, BY SIZE OF HOLDING, AND DEVELOPMENT AND ECOLOGICAL REGION

Size of holding	Total		Forest trees			Compact plantation			No. of scattered trees	
	No. of holdings	Area (ha)	No. of holdings reporting	No. of holdings	Area (ha)	No. of holdings	Area (ha)	No. of trees	No. of scattered trees	
										No. of trees
Holdings without land	26 700	1 18.2	1 179	229	10.2	13 979	6 966			
Holdings with land	3 337 439	2 653 918.9	988 682	165 896	27 046.8	20 531 152	18 152 847			
Less than 0.1 ha	260 547	13 241.6	34 510	1 294	21.9	16 356	197 346			
0.1 to 0.2 ha	346 113	49 864.2	57 950	2 959	273.9	100 789	521 328			
0.2 to 0.5 ha	972 259	327 060.8	246 199	23 441	1 507.2	1 119 226	3 309 725			
0.5 to 1 ha	915 674	641 659.3	307 306	50 067	4 704.4	4 879 101	5 829 048			
1 to 2 ha	588 649	791 965.0	229 431	53 555	9 420.9	7 004 889	5 207 090			
2 to 3 ha	157 026	371 223.0	67 736	18 525	4 618.6	3 238 454	1 840 780			
3 to 4 ha	51 573	175 690.5	23 361	7 772	2 452.6	1 620 373	623 822			
4 to 5 ha	20 241	89 257.5	10 212	3 608	1 427.7	1 129 234	287 648			
5 to 10 ha	21 575	139 750.2	10 393	4 061	2 195.6	1 265 672	292 272			
10 ha and more	3 783	54 206.7	1 585	614	423.9	157 058	43 787			
Total	3 364 139	2 654 037.1	989 860	166 126	27 057.0	20 545 131	18 159 813			

Source: CBS, 2004.

ANNEX 2: PERCENTAGES OF FARM HOUSEHOLDS PLANTING FOREST TREES BY SIZE OF HOLDING, AND DEVELOPMENT AND ECOLOGICAL REGION

Size of holding	Percentage of households										
	National average		Average for the development region(2001/2002)					Average for the topographic region			
	1991/92	2001/02	EDR	CDR	WDR	MWDR	FWDR	Mountain	Hills	Terai	
Holdings without land	5.14	4.42	5.60	1.643	4.05	13.71	0.00	3.24	3.95	4.58	
Holdings with land	39.89	29.62	36.40	29.22	32.84	24.56	14.77	38.30	33.28	23.89	
Less than 0.1 ha	15.94	13.25	15.90	10.29	12.93	23.98	4.54	15.46	12.68	13.45	
0.1 to 0.2 ha	22.84	16.74	18.80	16.04	20.17	17.86	8.47	28.42	18.50	12.68	
0.2 to 0.5 ha	32.96	25.32	29.48	27.93	28.63	19.83	11.23	35.94	28.16	17.88	
0.5 to 1 ha	43.73	33.56	38.16	36.97	38.60	24.95	15.35	39.42	38.29	25.18	
1 to 2 ha	50.17	38.98	46.05	37.49	42.15	30.35	25.40	44.98	46.81	31.39	
2 to 3 ha	55.12	43.14	51.46	36.69	44.85	36.42	28.53	54.38	55.21	36.73	
3 to 4 ha	60.52	45.30	52.04	37.49	49.71	36.20	37.02	50.88	56.06	41.33	
4 to 5 ha	62.01	50.45	60.00	39.39	49.10	45.78	48.02	61.34	63.10	46.83	
5 to 10 ha	65.39	48.17	56.43	37.98	59.08	42.05	37.00	45.58	74.17	45.58	
10 ha and more	73.34	41.90	68.37	41.38	34.27	6.33	48.09	100.00	70.05	35.43	
Total	39.48	29.42	36.01	28.98	32.68	24.51	14.71	38.18	33.19	23.62	

Sources: CBS, 1993; 2004.

ANNEX 3: AREA DEVOTED TO FOREST TREE PLANTING AS PERCENTAGE OF TOTAL AREA OF HOLDING, BY SIZE OF HOLDING, AND DEVELOPMENT AND TOPOGRAPHIC REGION

Size of holding	Percentage of area of holding												
	National average		Average for the development region(2001/2002)						Average for the topographic region				
	1991/92	2001/02	EDR	CDR	WDR	MWDR	FWDR	Mountain	Hills	Tarai			
Holdings without land	1.02	12.93	19.24	0.55	69.34	129.24	0.00	11.43	89.83	8.54			
Holdings with land	1.70	1.92	2.52	1.71	2.05	1.56	0.93	2.89	3.18	0.83			
Less than 0.1 ha	1.27	2.16	2.70	0.44	2.87	13.33	0.19	3.86	0.54	3.46			
0.1 to 0.2 ha	2.68	3.39	0.76	1.30	7.84	4.82	0.51	2.40	5.14	1.16			
0.2 to 0.5 ha	1.56	1.82	1.91	2.47	1.70	3.41	0.75	3.64	1.92	1.36			
0.5 to 1 ha	1.29	1.61	2.55	1.41	1.77	1.38	0.94	2.24	2.25	0.63			
1 to 2 ha	1.73	2.07	2.48	2.23	2.18	1.47	1.15	2.34	3.36	1.02			
2 to 3 ha	1.86	1.95	2.57	1.32	2.45	1.26	0.91	4.82	4.35	0.66			
3 to 4 ha	2.20	1.93	2.49	1.16	1.88	1.77	1.77	2.91	5.29	0.75			
4 to 5 ha	1.51	2.01	2.63	1.80	1.53	2.20	1.61	8.59	6.64	0.47			
5 to 10 ha	2.34	1.93	3.48	1.11	1.48	0.84	0.17	2.96	10.69	1.02			
10 ha and more	3.13	1.00	1.81	1.17	1.46	0.24	0.33	1.46	3.16	0.67			
Total	1.70	1.92	2.53	1.71	2.06	1.56	0.93	2.89	3.18	0.83			

Note: The proportion of area devoted to tree planting is less reliable for holdings without land. All households reported the number of trees planted in a scattered way. Equivalent area was calculated by dividing the number of trees reported by the average number of trees per hectare that is available for holdings with land.

Sources: CBS, 1993; 2004.

ANNEX 4: TREND IN EXPANSION OF COMMUNITY FORESTRY

Year of handover	No of CFUGs formed	Area handed over (ha)	No. of households	Area per Household (ha)
Before 1985	98	5 661.99	10 596	0.53
1985	1	15.50	53	0.29
1988	1	27.00	35	0.77
1989	10	567.96	1 115	0.51
1990	42	1 972.57	4 492	0.44
1991	87	5 011.53	12 973	0.39
1992	349	20 844.55	36 214	0.58
1993	737	52 121.01	80 944	0.64
1994	1 224	88 745.39	142 772	0.62
1995	1 654	120 817.47	179 876	0.67
1996	1 762	156 889.46	196 203	0.80
1997	1 592	133 978.83	177 390	0.76
1998	1 443	136 603.51	168 939	0.81
1999	1 157	99 210.00	135 182	0.73
2000	1 074	90 872.65	121 796	0.75
2001	850	84 773.63	96 737	0.88
2002	597	51 677.02	74 295	0.70
2003	578	43 496.10	67 697	0.64
2004	493	38 770.41	59 844	0.65
2005	42	7 176.44	8 359	0.86
Total	13 791	1 139 233.02	1 575 512	0.72

Source: Department of Forests, 2005.

ANNEX 5: TREND IN EXPANSION OF LEASEHOLD FORESTRY

Year	No. of groups	Beneficiary households (No.)	Leased area (ha)	Area per household (ha)
1993	4	29	26	0.90
1994	62	451	391	0.87
1995	83	553	416	0.75
1996	166	1 178	647	0.55
1997	254	1 716	1 079	0.63
1998	408	2 694	1 673	0.62
1999	328	2 208	1 245	0.56
2000	249	1 766	1 045	0.59
2001	108	892	522	0.59
2002	44	330	142	0.43
2003	250	1 906	851	0.45
2004	165	1 399	470	0.34
Total	2 121	15 122	8 507	0.56

Source: Department of Forests, 2005.