SUMMARY OF CASE STUDY – NEPAL[1]

Executive Summary

Nepal's *Tenth Plan (2002-2007)* (Nepal 2003b) serves as Nepal's Poverty Reduction Strategy Paper (PRSP) and outlines the country's plan for reducing poverty from 37 percent to 30 percent. Although Nepal has promoted a progressive forest policy that attempts to address the needs of rural people, more needs to be done to address poverty alleviation and equity. Nepal's 20-year-old community forestry program, through which local people are given the right to manage their local forests, has served as a model for other forestry programs.

The *Tenth Plan* was developed through a two-year participatory process with meetings in the different regions and with different groups of people. Within the Ministry of Forestry, some controversy exists at the higher levels on whether poverty should be part of the forestry sector's plan. Some believe that forestry preservation should be the ministry's primary objective; however, this has not been agreed on by members of the ministry departments (especially community forestry and leasehold forestry groups of the Department of Forest [DOF]). People involved in preparation of the PSRP noted that they lacked skills to fully develop log frames and impact indicators that would link forestry to poverty reduction.

Despite the differences of opinion and challenges, the *Tenth Plan* outlines several ways that the forestry sector can contribute to poverty alleviation, proposing several objectives to be achieved through community and leasehold forestry programs, and through tourism. Anticipated impacts include providing income-generating opportunities for 278,680 households in community forestry and leasehold forestry development programs. Furthermore, it is anticipated that 12,000 jobs would be created in village areas through community forestry, collaborative forestry, and soil and watershed management programs. Local autonomous rule will be developed through the formation of 20,000 participatory user groups (on community forestry, leasehold, watershed conservation, and biodiversity conservation) that will directly participate in formulating user plans, making decisions, implementing, monitoring, and evaluation. The poor, women, and disadvantaged castes will also be given a greater role in making decisions and formulating plans.

The five-year plan will build on Nepal's existing forestry programs, such as leasehold forestry, community forestry, and promotion of ecotourism, as means to help alleviate poverty. These programs, some of which date to the 1970s, show how Nepal has attempted to address forestry needs of rural populations. Except for leasehold forestry, which targets only poor and disadvantaged groups such as women and low castes, the forestry programs need to improve how they include and address the needs of the poorest of the poor and not further marginalize them.

Three case studies of villages falling within a conservation area (World Wildlife Fund's (WWF's) Terai Arc Landscape [TAL]) show that people do indeed depend on forest products for their livelihoods, that the use of products and dependency on forests varies based on income, and that community forestry, while providing great benefits to the community, could do more to address issues of equity and poverty alleviation. In addition, the study shows how Nepal's community and leasehold forestry programs are already contributing to the Millennium Development Goals (MDGs). Community forest user groups (CFUGs), for example, are building schools and health clinics with resources earned from the forests.

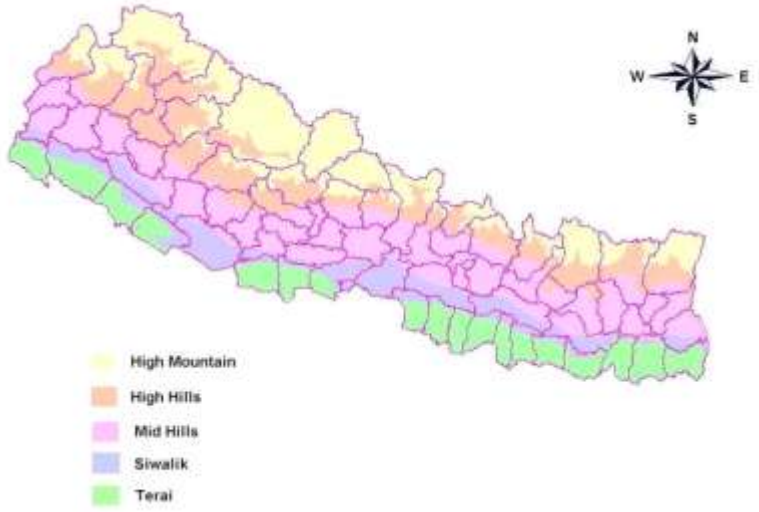
[1] Original case study was prepared by Winrock International including Erin Hughes and Shyam Upadhyaya, September 2005

Background and Overview

Poverty in Nepal

Nepal, a 147,181-square-kilometer Himalayan kingdom, shares borders with India to the south, east, and west, and with China (Tibet) to the north. Known for the tallest mountain in the world, Mount Everest, Nepal has diverse topography, ecology, and cultures. The country is commonly divided into three major ecological zones that run east to west across the country and also serve as social, economic, and sometimes political units of analysis. From north to south, these zones include mountains, (4,877 to 8,848 meters in elevation), comprising about 35.2 percent of Nepal's land area and bordering Tibet; the "mid-hills", (610 to 4,788 meters in elevation), comprising 41.7 percent of land area; and, the Terai (up to an altitude of 610 meters in elevation), a subtropical plain comprising 23.1 percent of land area and sharing the longest border with India. Siwalik (also known as Chure) is a range of smaller hills that runs east to west between the Terai plains and mid-hills (figure 1). Parts of Siwalik lie in Terai districts and others lie in mid-hill districts. For administrative purposes, Nepal is divided into five development regions: eastern, central, western, midwestern, and far western. Two major cities are located in the mid-hills (Kathmandu and Pokhara), and remaining urban areas are in the Terai.

Figure 1: Map of Nepal Showing Five Physiographic Regions



Source: WWF Nepal

About 24.7 million people live in Nepal, which includes 102 ethnic groups and 92 languages (Nepal/CBS 2002). Before the 1950s, the majority of the population lived in the mid-hills, but eradication of malaria and improved infrastructure sparked ongoing migration from the mid-hills to the Terai, which is now Nepal's most densely populated region. Based on population and land area, the density of people in the Terai is 10 times that of the mountain zone, and about twice that of the mid-hill zone. The ratio of people per unit of cultivated land, however, is greatest in the hills, followed by the mountain and then the Terai regions.

Nepal's economy continues to be mostly based on agriculture. Although the share of agriculture in total gross domestic product (GDP) has declined in recent years, about 80 percent of the population still depends on agriculture for its livelihood (Nepal/NPC 2003b). The rest of the population makes a living predominately in the service and manufacturing sectors. An emerging income sector of Nepal is export of labor to other countries, particularly Malaysia and in the Middle East. The money sent back has significantly affected Nepal's economy and changed the social landscape, leaving more women behind to manage households. Although forests are not considered a major economic sector in Nepal, the role of forests at the household level, and for agriculture, continues to be significant and underreported.

According to the United Nations' Human Development Index (HDI), Nepal ranked 140 of 177 countries in 2002. Poverty is ubiquitous in the country. The national poverty line is defined as the minimum income required to meet the minimum consumption needs of 2,140 kilocalories of food, and other non-food items, such as clothing, health, education, fuel, and so on (Lanjouw, Prennushi, and Zaidi 1998). The

1996 Nepal Living Standard Survey calculated poverty line income as Nepalese rupees (Nr^p) 4,404 per person per year.[2] The 1996 survey found that Nepal's incidence of poverty was 42 percent; 37.7 percent of the population of Nepal fell below the international poverty line of US$1 a day, and 82.5 percent fell below US$2 a day. Beyond international comparisons, to an average Nepali a "secure livelihood source and sufficient food for the family" is a critical difference between the poor and the rich.

Poverty is higher in rural areas (44 percent) than in urban areas (23 percent). The poorest communities are found in the mountain region of Nepal, where 56 percent fall below the poverty line. In the mid-hills, 41 percent[3] of the people fall below the poverty line. In the Terai, 42 percent fall below the poverty line. Remote and rural areas of the midwestern and far-western hills and mountain regions are the poorest. The midterm evaluation of the *Ninth Plan (1997–2002)* estimated that the incidence of poverty declined from 42 percent in 1996 to 38 percent in 1999–2000, although absolute numbers of poor have increased. Poverty also varies among caste and ethnic groups, with the incidence of poverty being highest among Limbus (71 percent), an indigenous ethnic group, followed by Dalits (67 percent), the lowest caste (untouchables) in Hinduism (NESAC 1998).

Forest Resources and Management

Forests, including shrubland, cover about 39.6 percent of Nepal's area from the timberline at higher altitudes to subtropical regions of the plains. Forest cover has been declining at a rate of about 1.7 percent a year (Nepal/DFRS 1999). The variation in geoclimatic conditions in different parts of Nepal provides suitable habitats for different kinds of tree species, and adds to the country's rich biodiversity. The forests can be categorized into five different types: tropical, subtropical, temperate, subalpine and alpine, based on the three major ecological zones. Some variation exists in tree species found between the eastern and western parts of Nepal as western Nepal, in general, has a drier climate.

The economic value of the various forest types varies greatly, but all forests have value and provide goods, benefits, and services to all Nepalis. The Terai has the most commercially valuable timber within the tropical *sal (Shorea robusta)* forests. *Sal* and *khair (Acacia catechu)* are the two most commercially valuable species. In the mid-hills, forests benefit local communities by providing fodder, fuel wood, food, fiber for houses and baskets, and medicinal remedies. In areas with roads, forest products are sometimes exported to nearby cities or to India. In the mountains, forest areas are valued for their valuable non-timber forest products (NTFPs) and are used for grazing livestock. An estimated 700 to 1,700 species of medicinal and aromatic plants are found in Nepal, of which about 100 are reported as traded.Examples include *Acorus calamus (bojo), Picrorhiza scrophulariflora (kutki), Rheum australe (padamchal), Swerita chirayita (chiraita), Valeriana jatamansi (suganhwal), Cordyceps sinensis (yarsa gumba), Dactylorhiza hatagirea (panch awale)*. These NTFPs generate substantial royalties for the government.

Nepal continues to rely heavily on forest resources for energy needs. Fuel wood supplies about 78 percent of total energy consumption in Nepal, and forests are the main source of fuel wood. Forests provide more than 50 percent of fodder to livestock (Nepal/CBS 2003). Especially in rural mid-hill and mountain regions, households depend almost entirely on forests for their timber needs. The level of consumption of chemical fertilizer in Nepal is low and limited to more accessible parts of the country; farmers in remote hills and mountains still depend on organic manure for plant nutrients. Forests are the main source for raw materials, such as livestock fodder and bedding materials used for making compost, which is then used to fertilize fields.

The 1993 Forest Act recognizes two types of forests based on ownership: private and national. Private forests include woodlots, private plantations, and orchards, for example. National forests include all state-owned land area under forest/tree cover, including scrublands, grasslands, unregistered lands surrounding or adjoining forests, as well as paths, ponds, lakes, and rivers within forest areas. For the purposes of management, national forests are divided into five categories: community forest, leasehold forest,

[2] One U.S. dollar = Nr 56.25 in July 1996.

[3] This includes Nepal's two largest urban areas, which are relatively well off. If urban areas are excluded, the percentage of people below the poverty line would be much higher.

"religious forest," protected forest, and government-managed forest (forest area not yet allocated for the other four types of management). Community, leasehold, and religious forests fall under the participatory management regime. User groups are formed and given responsibilities and authority for protecting and managing such forests. About 61 percent of the total national forest area is reported to be potential community forest area. About 17 percent of the country's area is located in the protected area system, which consists of conservation areas, hunting reserves, wildlife reserves, and national parks. The protected area system has adopted the principle of people's participation in conservation and management. With introduction of the concept of buffer zone area management, community involvement in the protected area system is getting wider recognition (Chhetri, Sigdel, and Malla 2001).

By November 2004, 13,568 CFUGs managed a total of 1,115,317 hectares of forests (about 19 percent of Nepal's total forest area). Community forestry, which originated in the recognition that rural people, especially in the mid-hills, depend on forest resources for their livelihood, are active in 74 of 75 districts of Nepal. Since 1992, Nepal has implemented a leasehold forestry program, in which the government leases patches of degraded land to groups of poor households for 40 years. This program is presently active in 26 districts of Nepal. A total of 2,100 leasehold groups have been formed.

Overall responsibility for managing Nepal's forests lies with the Ministry of Forests and Soil Conservation (MOFSC). This ministry has five divisions (Planning and Human Resources, Foreign Aid Coordination, Environment, Monitoring and Evaluation, and Administration), five departments (Forests, Soil and Watershed Conservation, National Parks and Wildlife Conservation, Plant Resources, and Forest Survey and Research), and five regional offices. The Department of National Parks and Wildlife Conservation (DNPWC) oversees management of protected areas, and the DOF oversees management of other types of forests. The DOF has district-level offices in 74 of 75 districts of Nepal (figure 3, see appendix).

Forest Contributions to the National Economy

Forests play an important role in Nepal's national economy. Although no separate statistics exist on the contribution of the forest sector to national GDP, the agriculture sector, including forestry, constitutes an estimated 40 percent of GDP, and forestry contributes about 10 percent of agricultural GDP. Official statistics show that between 1988–89 and 2002–03, the forest sector annually contributed Nr^p 355 million as government revenue, which is about 1.27 percent of total annual government revenue.

It is generally agreed, however, that official statistics grossly underestimate revenues from the forestry sector. Forests contribute value in terms of park fees, timber sales, community forestry benefits, and direct benefits to households. In a recent study, Kanel and Niraula (2004) estimated that community forestry groups in Nepal generate about Nr^p 1.9 billion a year. In 2002–03, protected areas in Nepal generated about Nr^p 60.9 million in revenue.[4] It is generally agreed that forests of Nepal, including community forests, have been underutilized and could produce more value if better managed. Great potential exists for increasing income from forests through improving management practices, without compromising their sustainability.

National Forestry Plan and Policies

Major policy documents guiding forestry sector programs include the *Master Plan of the Forestry Sector, Revised Forestry Sector Policy* (Nepal/MOFSC 2000), and the *Poverty Reduction Strategy Paper* (PRSP) (Nepal/NPC 2003a) or the *Tenth Plan* (Nepal/NPC 2003b).

Master Plan for the Forestry Sector (1989–2010). The formulation of the master plan was initiated in 1986 and completed in 1988. The main objective of the master plan is to meet the basic forest product needs of the people in a sustainable manner, and to contribute to economic growth through the promotion of forest-based industries. The plan identifies six primary programs and six supporting programs needed to fulfill its objectives. As mentioned, the primary programs are community and private forestry, national

[4] See www.dnpwc.gov.np.

and leasehold forestry, wood-based industries, medicinal and aromatic plants and other minor forest products, soil conservation and watershed management, and conservation of ecosystems and genetic resources. Supporting programs are policy and legal reform, institutional reform, human resources, research and extension, resource information and planning assistance, and monitoring and evaluation (figure 3, see appendix). The plan defines physical targets for each of the above programs and estimates investment requirements.

The master plan formalizes concepts of community forestry that have been initiated at the local level since the late 1970s. It recognizes the importance of people's participation in forest management. The plan, however, does not recognize poverty alleviation as an explicit goal. It reflects contemporary thinking of the 1980s that economic growth will eventually trickle down to the poor. As the plan covers 20 years, unanticipated changes have required amendments to the policy.

Revised Forestry Sector Policy. This policy revision gives continuity to the programs and policies of the master plan and introduces a concept of collaborative forest management for large blocks of forests in Terai and Siwalik (Chure). Collaborative forest management is a partnership between the government and local communities through which benefits from high-value forests are shared between the two groups. The main changes to the original policy are to introduce a 40 percent tax on the income earned by CFUGs in Terai, Chure, and inner Terai from the sale of surplus timber. After much protest from user groups, the tax rate was reduced to 15 percent and limited to the sale of *sal (Shorea robusta)* and *khair (Acacia catechu)* for CFUGs in Terai only. The policy does not mention poverty alleviation or the MDGs.

Poverty Reduction Strategy Paper: Nepal's Tenth Plan

Nepal's PRSP is also Nepal's *Tenth Plan*, and runs from 2002–07.[5] The plan dedicates a full chapter to forestry's contribution, and includes a policy matrix with indicators. The key target is to reduce poverty from 38 to 30 percent by 2007. The plan tracks human and infrastructure indicators, including literacy rates, infant mortality, maternal mortality, life expectancy, access to drinking water, electricity, and roads. To meet its goal, the plan is built on four pillars with cross-cutting approaches (box 1).

Box 1: Four Pillars and Cross-Cutting Approaches of Nepal's PRSP

The poverty reduction strategy of the PRSP is based on the following four pillars: (a) broadly based economic growth, (b) social sector development, including human development, (c) targeted programs, including social inclusion, and (d) good governance. The PRSP emphasizes the need for growth to be broadly based to generate employment for poor people. The agriculture sector, which also includes forestry and irrigation, has been identified as the priority sector for broadly based economic growth, as this sector currently employs about 80 percent of the population. The PRSP further recognizes the need for social sector development, including human development. The PRSP also recognizes that broadly based economic growth and human development would not automatically benefit ultrapoor and socially excluded marginal social groups; hence, the PRSP proposes targeted programs, including social inclusion for these vulnerable groups. Moreover, the PRSP has identified good governance as a key to poverty alleviation as well as the following cross-cutting sectoral approaches: (a) redefining the role of the state and limiting public interventions, (b) enlisting the private sector to play a leading role in employment and income generation and, together with NGOs, international NGOs, and CBOs, in complementing government efforts in service delivery function areas, as well as implementing key activities, (c) promoting community participation in and management of activities at the local levels, and (d) accelerating the decentralization process.

Source: Nepal/NPC 2003a.

[5] The World Bank Web site at http://poverty.worldbank.org/files/Nepal_PRSP.pdf has a summary of the PRSP that does not accurately summarize Nepal's 10th five-year plan (the full version of the PRSP). The main difference is that the summary rarely mentions forestry except under agriculture, and lacks indicators in the index for tracking poverty and forestry.

Role of Forestry in the PRSP

The *Tenth Plan* presents forestry and soil conservation under the heading of high, sustainable, and broadly based economic growth, suggesting that the forestry sector can play a role in all sectors. One of the two objectives of the forestry sector is to support poverty reduction by creating opportunities for income generation and employment for poor, women, and disadvantaged groups through participatory forest development activities. The plan proposes three main strategies for achieving this objective: (a) expansion of leasehold forestry to create employment for deprived households that are below the poverty line, (b) increased access of women, deprived groups, and Dalits (untouchables) in community, leasehold, and collaborative forests, and (c) promotion of private sector investment and exports for sustainable management and proper utilization of valuable NTFPs. The plan also introduces the concept of leasehold forestry within community forests to benefit subgroups of the poor and deprived by establishing forest-based microenterprises. Forestry is further mentioned as having a key role in promoting health in livestock, making compost fertilizer, conserving the environment, and conserving groundwater resources for watershed management.

Forestry, however, is noticeably absent from other parts of the plan. Forest timber production is not mentioned, even though some speculate that, if sustainably managed, Terai timber production could produce enough revenue to run the entire country. The plan also does not mention timber harvesting with respect to CFUGs. Moreover, illegal harvesting and trade of timber is common. Forestry is not mentioned under trade, although substantial amounts of NTFPs are exported every year through legal and illegal channels. Official statistics show exports of herbal products worth Nr^{p} 43.1 million in 1999–2000 (Nepal/CBS 2003). (The amount of NTFPs and timber quantities that are traded every year is not known).

Forestry is not mentioned in reference to governance, despite the fact that CFUGs are one of the few remaining local institutions in areas heavily affected by the ongoing Maoist insurgency in Nepal. Forestry is not mentioned under tourism, despite the need for forested habitat to maintain populations of key wildlife, such as rhinos and tigers. Forestry is not mentioned in reference to energy, despite the significant role that fuel wood plays in rural energy consumption and the need for sound watersheds for hydropower; nor is forestry mentioned in the infrastructure/road section, despite the need to plant hillsides to prevent landslides after a road is cut.

It is important to note that, throughout the document, the government plans to work with international nongovernmental organizations (INGOs), nongovernmental organizations (NGOs), and community-based organizations (CBOs), including community forestry user groups.

PRSP Forestry and Poverty: Strategy and Indicators

The plan shows sectoral policies and policy matrices for all the line agencies contributing to poverty alleviation. These matrices are log frames and identify key output, outcome, impact, and process indicators. The sectoral objective for forest and soil conservation is to provide appropriate contributions from the forest sector in poverty alleviation by conservation promotion and proper use of the forest and environment. In other words, forestry will focus on poverty by conserving and improving management and use of forest products and benefits to increase people's income to alleviate poverty. Many of the strategies mentioned focus on the environment. The social strategies include:

- developing livelihood opportunities for disadvantaged people living below the poverty line by expanding leasehold forestry
- expanding community, leasehold, and collaborative forests, and raising the participation and access of poor, women, and disadvantaged communities to these forests
- sustainable management and utilization of valuable NTFPs, promoting investment of the private sector, and promoting exports
- developing community, leasehold, and partnership forests; raising participation and outreach to the deprived, women, and the poor in such forests.

The indicators for these strategies include:

- providing income-generation opportunities in forestry for 278,680 households through community forestry and leasehold forestry development programs
- creating 44,027,000 workdays, and creating 12,000 jobs, of which 34,027,000 work days would be created in village areas through community forestry, collaborative forestry, and soil and watershed management programs
- contributing to local autonomous rule by developing 20,000 participatory user groups (in community forestry, leasehold, watershed conservation, and biodiversity conservation), that will have direct access in formulating user plans, making decisions, implementing, and monitoring and evaluation
- giving the poor, women, and disadvantaged castes a greater role in decision making and plan formulation.

In order to achieve these goals, the work policies are targeting the involvement of 1,900,000 households in community forest consumer committees, increasing the participation of women and disadvantaged people in forest-related activities and decision-making processes, and increasing opportunities for marginalized groups. Furthermore, awareness will be raised about community forestry, and the supply of fuelwood will become more easily available. The work policies will arrange management of 13,000 hectares of leasehold forest by 3,000 leasehold groups, of which 1,500 will be formed by people living below the poverty line. They will increase employment of local people and increase people's participation in integrated soil conservation and watershed programs. Another policy will increase employment and income through effective participation of local people in implementing six buffer zone management plans. All programs of the forest sector will be implemented with local participation at the grassroots level in all 75 districts.

The PSRP Preparation Process

The PRSP was prepared through a participatory process. The National Planning Commission (NPC),[6]which had prepared earlier Nepalese development plans, identified poverty alleviation as the overarching goal of the *Tenth Plan*. For two years, NPC held consultations with different stakeholders, and five consultative meetings during preparation of the interim PRSP, which formed the basis for preparation of the approach paper leading to the PRSP or *Tenth Plan*. Three of these meetings took place in the eastern, central, and western development regions. Participants in these regional meetings included representatives from district development committees (DDCs), municipalities, socially disadvantaged classes, major political parties, NGOs, CBOs, academia, the private sector, women and ethnic minorities, and remote areas. Two additional national consultations were held with women's groups.

Five other regional public consultations, one in each of Nepal's five development regions, permitted discussion of the contents of the approach paper draft. Participants in these consultations included chairpersons and deputy chairpersons of DDCs, government officials, and representatives of academia, the private sector, ethnic minorities, disadvantaged and remote communities, NGOs, and CBOs. Two other public consultations at the central level—one with the Association of the District Development Committees of Nepal, which included chairpersons and vice chairpersons from all 75 districts of Nepal, and one with members of Parliament—were also held to discuss the content of the approach paper. The finalized PRSP approach paper was then submitted to the National Development Council for approval. The members of the council include ministers, representatives from all political parties, chairpersons of different committees of the House of Representatives, secretaries of line ministries, vice chancellors, representatives of the private sector and academia, ethnic minorities, labor unions, women, and national-level NGOs and CBOs.

[6] Nepal began preparing periodic development programs in 1956. Nine development plans were completed, and the PRSP became the 10th.

After approval by the National Development Council, the approach paper was developed into a full proposal. Technical committees headed by the secretaries of the line ministries coordinated preparation of sector strategies and programs. Individual line ministries prepared their plans, which they submitted to NPC and were categorized by NPC as first-, second-, and third-priority programs. NPC analyzed the programs in terms of their potential contribution to poverty alleviation and resource availability (Nepal/NPC 2003a).

As noted earlier, the PRSP does not fully recognize forestry's potential role for contributing to poverty alleviation. A number of reasons for this are possible. First, a conflict seems to exist among staff of the MOFSC on whether the main goal of the forestry program should be conservation or economic development. Some do not view the twin goals of conservation and economic development as being compatible. When a member of the Ministry of Natural Resources was asked why forestry was not more prominent in the PRSP, the reply was that the goal of the ministry was preservation of forests; however, greater agreement on compatibility of the two objectives exists within the forestry department. Second, even when forestry officials agree that forestry could contribute to poverty alleviation and should be a goal, they cannot articulate the linkages between forestry and poverty alleviation. The ministry as a whole lacks the capacity to articulate the relationship among forest resources, economic development, and poverty alleviation, and lacks skills on developing action plans and log frames, and monitoring results.[7] The social science research capability of the MOFSC is regarded as weak compared with other ministries, such as the Ministry of Agriculture and Cooperatives.

Financing

Trends in financing also indicate the priorities accorded by the government to the forest sector. The government of Nepal combines agriculture, irrigation, and forestry, and their collective budget makes up 24 percent of the total government budget. This same combined subsector, which the plan's authors note is crucial for alleviating poverty, was underfunded in the ninth five-year plan. The percent of expenditures in the forestry sector of the total government expenditure declined from 3.18 percent in 1988-89 to 1.96 in 2002-02.

The ministry said that no link existed between the PRSP and the governmental budgeting process and therefore, there was no incentive to demonstrate the relationship between forestry and poverty alleviation. Ministry officials understood that annual budgets were developed by looking at the previous year's budget and making adjustments as needed. They assumed that if they demonstrated a strong linkage between forestry and poverty by developing activities to address poverty, it would not increase funds for these activities.

Donor Programs in the Forestry Sector of Nepal

All major donor organizations and agencies working in forestry in Nepal emphasize the importance of poverty alleviation. Even the names of programs explicitly mention "poverty alleviation," "livelihood," or "governance." These organizations and agencies view forests as an entry point for livelihood improvement. In some cases, this emphasis could stem from criticism that community forestry further marginalizes the poorest members of the community (Winrock International 2002). In other cases, donors simply have recognized the importance of forestry in poverty alleviation and community forestry's role in local governance, and took action.

A Case Study

Sites: TAL Area

The Terai has been a destination for migrants from the mid-hills who seek greater access to roads, jobs, and better schools. The Maoist insurgency of Nepal has also resulted in greater settlement in the Terai.

[7] This was not unique to the MOFSC. Other line agencies had similar challenges.This was one area in which the ministry requested assistance.

The Terai is home to valuable timber and some of the last remaining habitat for tigers, rhinoceroses, and wild elephants. The wildlife provides opportunities for communities in terms of ecotourism, as well as problems as people encroach on habitat.

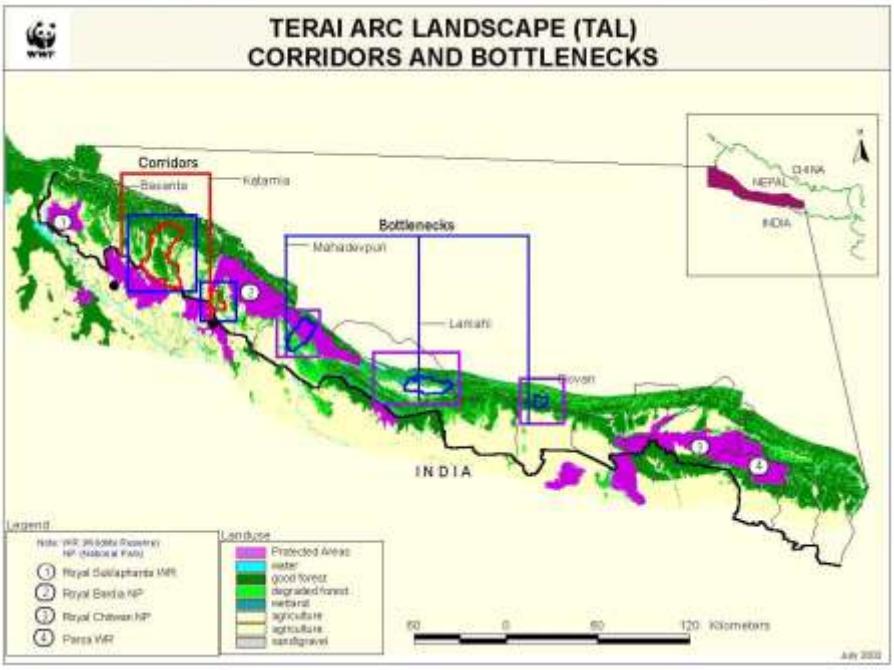
As a result of increasing international and national interest in conservation, especially of so-called "charismatic megafauna," the Terai region has become the focus of an ambitious program: the TAL Program. The DOF, the Department of National Parks and Wildlife Conservation (DNPWC), and the WWF–Nepal implement TAL, which started in July 2001. Its goal is to develop biological corridors to facilitate the movement of large animals from one park to another. Areas where the corridor needs to be reestablished are referred to as bottlenecks. At present, TAL has been working in four protected areas (Parsa, Royal Chitwan National Park, Royal Bardia National Park, and Royal Shuklaphanta Wildlife Reserve), and five areas between the parks (Dovan, Lamahi, Mahadevpuri, Khata, and Basanta).

The sites selected for the case study are adjacent to the TAL program. This case study provides not only insight into how people use the forest, but also an opportunity to see how livelihoods are affected when biodiversity goals are being addressed, thereby furthering understanding on how to meet the dual goals of conservation and development. The case study focused on three communities—Dovan, Lamahi, and Mahadevpuri (figure 2). They lie in the bottlenecks identified by TAL that are considered critical for restoring forest connectivity. Two of the three communities lie in Terai and one is in the mid-hills. Most of the households fell below the poverty line, but economic differences existed among households. Wage labor and remittances supplemented livelihoods. For the most part, the households depended on farming to produce food for the household. Forests are a key component of the community farming system in Nepal. Livestock depends on fodder leaves (some leaves provide key nutrients during the dry season) and bedding, generally collected from the forest. Manure and compost are added to the fields for fertilizer. In addition, most households depend on wood for fuel.

Methodology

The objective of the case study was to learn how different groups of people use the forest, and how the forest contributes to their livelihoods. The approach consisted of using a variety of participatory rural appraisal techniques. First, three researchers met with the forest department and village leaders (including

Figure 2: Terai Landscape Corridors and Bottlenecks



Source: WWF Nepal.

the CFUG leader) to inform them of the case study's purpose and, through interviews, get their assessment of the village. They were asked about themselves and the community (how it uses the forests, how wealth is defined, and how it is ranked). These leaders served as informants, guiding the team on other people to interview. The security situation limited the team, as they were restricted to only certain areas. Local people strongly advised the research team not to go to areas far from the roadside. In the case of Terai communities (Lamahi and Mahadevpuri), local leaders helped to gather households in their respective CFUG offices near the highway. In those locations, households were consulted both as a group, and then selected households from different socioeconomic strata were interviewed on an individual basis. In the case of Dovan, a hill area, a small group meeting with the area's ranger from the DOF and CFUG officials was held. These officials directed the research team to households from different socioeconomic groups for interviews. Attempts were also made to consult at least a few female-headed households. Members of households interviewed were those who the researchers met when they visited those households or whom the households sent as their representative. No attempt was made to contact a particular member of a family.

Interviews consisted of casual, informal, open-ended questions. The questions focused on who uses the forest, how they use the forest, and how it contributes to their livelihoods. Information was also gathered on how local community members, especially the poor, perceive WWF's wildlife conservation program in terms of benefits and costs. Key questions were asked to elicit information on assets, income sources, forest utilization, and other forest-related issues (including the impact of the TAL program)[8].

Dovan

Dovan is a hill community located adjacent to the Terai. One of the 65 village development committees (VDCs) of Palpa district, Dovan has about 1,230 households, with an estimated population of 6,700 (3,400 female and 3,300 male) (based on Nepal/CBS 2002).

Results

As in any village, people in Dovan fall along a spectrum of well-being—the wealthiest would still be considered impoverished by Western standards. People in the area relate poverty to the lack of land or inadequate land, and to the lack of stable sources of income. From the survey data, the researchers defined four levels of well-being. Group I consists of five landless, resource-poor households. Of all the groups, only Group I depended on forest products as a source of direct cash income. Group II consists of 16 households with a little land, but their agricultural production is not adequate to feed their family for an entire year. These families, along with those in Group III, depend more on selling livestock than other groups. Group III consists of 11 better-off households whose landholdings are adequate for maintaining their family for most parts of the year. Their income was supplemented by selling livestock, and they used the forest indirectly for a large percentage of their income for fodder and bedding. Group IV consists of five households with landholdings that produce not only an adequate amount for maintaining the family for the whole year, but also enough to sell in the market. They also benefit from remittances from the labor of a family member in a different place.

Agriculture is the primary source of livelihood. The landless households depend on seasonal agricultural employment. Two of five landless households practice sharecropping. One landless household cultivates crops on government land. Households from Groups II to IV derive all or part of their food needs from agricultural production. The size of their landholdings varies from none to 4.3 hectarers per household. Only one household from Group III rents others' land for sharecropping, whereas two households from Group III rent land. None of the households from Group IV rents land. A few well-off households also owned land in nearby Terai districts. Crops grown included paddy, maize, wheat, mustard, gram, masuro, cauliflower, and tomatoes. Groups of households also differed in the types of agricultural crops grown. Farmers from Groups II and III are more likely to grow vegetables as a cash crop. Farmers from Group

[8] Editor's Note: The stated total number of households surveyed in each community in a case study was not consistent with the total number of households reported, as indicated by the four levels of well-being. Therefore, only the data on the number of households by category of well-being was included.

IV, on the other hand, grow cereals generally for subsistence and barter, but these are not high-value crops.

Forest Resources and Their Management

Of all the VDCs[9] of Palpa district, Dovan is considered the richest in forest resources. This VDC used to export forest products to other parts of Palpa and also outside the district. During construction of the Pokhara-Butwal road (Siddartha Highway), many laborers moved into the area to work as construction workers. After completion of road construction, many of these workers settled at the edge of the forest near the roadside. Fuel wood collection and selling became a main source of livelihood for these households. Timber traders from Butwal and other areas felled trees indiscriminately. Soon the forest became quite degraded. Because it was a national forest, the local people had neither incentives nor rights to check this deforestation. With formation of CFUGs, the community started banning the sale of fuel wood. Groups of households joined together to form CFUGs and began protecting patches of forest nearby.

At present, 28 CFUGs manage most of the forest in the area. An estimated 15 percent of the forest area is still under government control, but none of the respondents in the survey sample said they use government forests. In addition, there is one "religious forest," as defined by the government.

Fuel wood, fodder, grass, timber, NTFPs, and pasture are the main forest products used by households. Only 6 percent of households said they take animals for grazing in the forest. *Khar* (thatch grass) and *babiyo* (*sabai* grass or *Elaliopsis binnata)* are common NTFPs used by the community. In all CFUGs, members are allowed to collect only dead and fallen trees for fuel wood. All households are required to contribute equal amounts of labor to silvicultural operations. Members are allowed to use forest products only for personal consumption. Such rules have hurt those households that used to derive part of their livelihood by selling fuel wood and other forest products. The rules have also benefited wealthier households more than poorer households, as wealthier households tend to use more forest products, either because they have larger size families or because their livestock holdings are larger.

Table 1 presents the survey's findings on the average quantity of forest products used by different categories of households. The table clearly shows inequity issues in the use of forest products; rich households are benefiting more from forest. This is based on information from the 14 CFUGs. Fuel wood and fodder use by households in Group IV was almost three times that of households in Group I. Households also need timber for constructing new houses and animal sheds, repair and maintenance of old houses, and agricultural implements.

Table 1: Use of Forest Products by Respondent Households in Dovan

Forest Products	Quantity of Forest Products Per Household			
	Group I	**Group II**	**Group III**	**Group IV**
Fuel wood *(bhari*/month)	4.40	9.60	9.18	11.00
Fodder *(bhari*/day)	0.75	0.93	2.09	1.60
Grass *(bhari*/day)	1.50	1.33	1.91	2.10
Timber (cubic foot/year)	6.25	17.73	17.14	20.25

Note: One bhari equals about 25 kilograms.

Source: Field Survey, October 2004.

[9] VDCs, made up of nine wards, are the lowest-level local governance bodies in Nepal, The district development councils (DDCs) are a higher administrative unit and play a substantive role in implementing government policies, decentralization efforts, and development activities. Within each DDC are a number of VDCs and municipalities. Between the DDC and VDC levels are clusters of VDCs called *ilakas.* There are nearly 4,000 VDCs in Nepal.

Many CFUGs have begun to generate community-level funds through the sale of forest products, membership fees, and fines. Timber is the principal forest product sold outside the community. Fuel wood, fodder, and grass seem be just adequate to meet community needs and are rarely sold outside the community. Last year, the CFUGs in Dovan made an estimated income of Nr^{p} 20 million. The TAL program provided about Nr^{p} 700,000 to the CFUG coordination committee in Dovan to launch conservation and development programs.

CFUGs in Dovan's VDC have spent their income on forest conservation and community development activities. For example, in 2003–04, Khulkhule's CFUG, the largest such group in Dovan, spent its income for constructing irrigation canals and school buildings, and hiring two forest guards for eight months, one office secretary, and one accountant. Of Nr^{p} 700,000 provided by the TAL program, Nr^{p} 400,000 was used to build a 2.5 kilowatt microhydro plant. Electricity from this plant is distributed among the households from Barpokhari and Dhapkhola CFUGs. A portion was also used for electricity distribution to the members of Dhapkhola CFUG. Other activities supported by TAL include improved cooking stoves, goat farming, buffalo farming, and breed improvement of goats and buffaloes.

The forest also generates employment for local people; a few CFUGs hire salaried staff such as an office secretary, forest guards, and so on. The forest also provides raw materials to forest-based industries that in turn create jobs for local people (box 2).

Box 2: Forest-Based Enterprises in Dovan

A Jadaibuti Conservation and Utilization Cooperative was formed in 1999. In 2002, this cooperative established an industry for making herbal oil in Dovan. This industry tried producing oil from *tejpat (Cinnamomum tamala),* but it was discontinued due to lack of markets. It then started producing oil from *titepati (Artimesia indica* or mugwort). Farmers collect *titepati* from community forests and private land and sell it to the industry at Nr^{p} 2 per kilogram. About 600 kilograms are needed to produce 1 kilogram of oil. The price of *titepati* varies from Nr^{p} 2,300 to Nr^{p} 3,000 per kilogram. This industry is hiring one full-time and two part-time office staff on a regular basis, and about eight to nine laborers during the season (May 15 to July 15). At present, plant capacity seems underutilized, but there are possibilities for making oil from other NTFPs, such as lemon grass, neem, and *sarpagandha.*

[Source: Field Survey , October 2004]

Lamahi

Lamahi comprises four VDCs (Lalmatiya, Choulahi, Sisahaniya, and Sonpur) in the Dang district. The area had 9,788 households, with an estimated population of 58,795 (29,171 females and 29,624 males) in 2001. Tharus, an indigenous group of people of Nepal's Terai, were the original inhabitants of the area. The community is currently a mix of Tharus and hill migrants.

The households surveyed were classified into four groups of well-being, as they were in Dovan. There were 13 households in Group I, nine households in Group II, two in Group III and seven in Group IV. Size of landholdings (in hectares) in Lamahi ranged from none for Group I to 0.26 and 0.3 for Groups II and III, respectively. Group IV had the largest landholdings, at 2.19 hectares. Wages constitute an important source of cash income for all categories of households. As in the case of Dovan, livestock as a source of cash income plays a relatively important role for households in Groups II and III. Only households from Group IV earned cash income from remittances. Groups I and III earned some cash from the sale of forest products.

Forest Resources and Their Management

As in Dovan, this area was once rich in forest resources. Much of the destruction of the forest took place during the construction of the East-West Highway. Events such as the National Referendum (Janamat Sangraha)[10] in 1980 and People's Democracy Movement in 1990 led to further destruction of forest.

[10] Held in Nepal to elicit people's opinion on whether they wanted multiparty or partyless democracy.

Before initiation of conservation programs, the situation became so bad that people were forced to get up at 3:00 a.m. to get to the other side of Rapti to get one *bhari* (about 25 kilograms) of thatch grass. People were initially skeptical about conservation of forest by the community, as they thought it was a trick by a few influential members of the community to register forestland in their names. When a few community people got together one year and put a ban on the collection of thatch grass, there was a significant increase the following year in thatch grass for the community. This helped people to understand the value of conservation.

This area falls under the Narti Range Post of the Dang District Forest Office. About 9,000 hectares have been handed to 28 CFUGs for management. Some forest in the Chure (Silawik) range is still managed as government forest. Forest area per CFUG varies from 3 to 1,486 hectares, and the number of households per CFUG varies from 27 to 640. The number of women in the executive committee of CFUGs varies from none to 11.

Table 2 presents survey findings on the use of forest products by respondent households. Households get forest products free or at a concession price. Some CFUGs require user households to buy a coupon for collecting fodder or cut grass. The price of the coupon varies from Nr^{p} 5–10 per season; however, rules vary among CFUGs. For example, the users of Rapti CFUG do not need to pay for fuel wood collected from the community forest for their own consumption. Users can collect fuel wood only on Saturdays. Users who wish to collect fuel wood for sale must pay Nr^{p} 15 for four Saturdays. These users can collect only one *bhari* on one Saturday. The market price of fuel wood is about Nr^{p} 50–60 per *bhari.* Rapti CFUG does not charge users for fodder and cut grasses. Poles for house construction are Nr^{p} 1 per pole and dead and fallen *sal* trees are Nr^{p} 50 per cubic foot.[11] Rules tend to vary according to the financial situation of the CFUGs.

Table 2: Use of Forest Products by Respondent Households in Lamahi

Forest Products	Quantity of Forest Products Per Household			
	Group I	**Group II**	**Group III**	**Group IV**
Fuel wood *(bhari*/month)	5.69	6.82	8.0	3.33
Fodder *(bhari*/day)	0.11	0.60	1.5	0.57
Grass *(bhari*/day)	0.57	0.70	0.25	1.00
Timber (cubic foot/year)	4.11	2.25	8.00	17.00

Source: Field Survey , October 2004.

CFUGs have also begun to generate community funds. The main sources of income include membership fees, sale of forest products, and contributions from donor agencies. Rapti CFUG, which was identified as the highest-earning CFUG among 28 CFUGs, collects about Nr^{p} 500,000 in annual income in years when timber is sold. Three CFUGs earn some money by supplying *babiyo* (sabai grass), a raw material used for paper production, to a paper factory (Bhrikuti Paper Mill) in Nawalparasi. Last year, the TAL program provided about Nr^{p} 1.1 million to CFUG coordination committees. Other donors, such as DFID's Livelihood Forestry Programme (LFP) and CARE/Nepal, are also working in the area. Donors have provided support in the form of cash, as well as training and technical assistance.

CFUGs have used community funds to support forest conservation, infrastructure development, and income-generation activities, such as forest-based microenterprises (box 3), pig and goat farming, and retail shops. One CFUG's goat/pig farming program provides loans to groups of five poor households. In such schemes, the loan is usually interest free and must be paid back in one year. The money is then given to another group. Such revolving funds normally come from donor projects such as TAL and LFP, but there are a few instances in which CFUGs have invested their own funds in these activities, which generally benefit women and disadvantaged groups. As box 3 shows, such enterprises have benefited women and vulnerable groups.

[11] Fallen *sal* trees command a minimum price of Nr^{p} 250 per cubic foot.

Box 3: Forest-Based Enterprises in Lamahi

Rope production. Kalapani CFUG started a small enterprise to produce ropes from *babiyo* grass in March 2003. This CFUG purchased four rope-making machines for Nr^{p} 32,000. The TAL program provided Nr^{p} 25,000, and CFUG invested Nr^{p} 12,000 from their own funds. Six women and two men from the CFUG were trained in the rope-making technology. Two women are now employed on a part-time basis by this enterprise. One kilogram of rope can earn Nr^{p} 17.50 to Nr^{p} 20 if sold outside the CFUG, and Nr^{p} 12 if sold to CFUG members. The income is distributed as follows: Nr^{p} 5 for people involved in rope production, Nr^{p} 3 for people collecting *babiyo,* and Nr^{p} 2 for forest guards. The remaining money goes to the CFUG fund. One of the two women employed in this enterprise is a widow and an ex-Kamaiya. She has three children and very few productive assets. She said it is a part-time job as no adequate market exists for ropes. She has been able to make about Nr ^{p} 2,100 from this job so far. She said one person can make about 14 kilograms of ropes in one day.

Duna-tapari production. With Nr^{p} 25,000 of support from TAL, three groups of women of Karmadi CFUG have started a microenterprise for making *dunas* (paper bowl) and *taparis* (paper plates) from *sal* leaves. A machine was purchased from the Micro Enterprise Development Programme for Nr^{p} 18,000. The women were trained for three days before starting production. *Sal* leaves are collected from the community forest. One *tapari* can sell for Nr^{p} 1 and one *duna* can fetch Nr^{p} 0.35. Seventy-five percent of sales revenue goes to the women's groups, and 25 percent is deposited in the CFUG fund. The groups can decide themselves how to use such income. CFUG uses its share of income to pay for its electricity bill and other expenses.

Source: Field Survey , October 2004.

Mahadevpuri

The Community

Mahadevpuri VDC has 1,269 households, with a total population of 7,768 (3,733 females and 4,035 males). This is one of 46 VDCs in the Banke district in the midwestern development region, and a community of hill migrants from midwestern and far-western hills and indigenous Tharus. The households surveyed belonged to 10 different CFUGs. As in the case of Dovan and Lamahi, the households were placed in four groups of well-being. Group I had six households, Group II had 15 households, Group III had six households and Group IV had four. Statistics on caste/ethnicity of respondents indicate that Tharus (indigenous group) and Dalits (untouchables) are more likely to fall toward the bottom of the economic ladder.

Sources of cash income for different groups of households are similar to that of Dovan and Lamahi. Wages constitute an important source of cash income for all groups. Forest products provided cash income for only those households in Group IV. Landholdings (hectares) in Mahadevpuri were smaller on average than in the other two communities. They ranged from zero for Group I, 0.21 for Group II, 0.82 for Group III and 0.68 for Group IV.

Forest Resources and Their Management

Forest conditions in this area are reasonably good. Fourteen CFUGs have been formed, ranging in size from 36 to 292 hectares, with 36 to 294 household members. Two or more CFUGs have joined together to form biodiversity conservation groups, of which six now exist. These groups were formed mainly to prevent timber "mafia" and outsiders from destroying their forests, as individual CFUGs were unable to face such encroachers by themselves. Six biodiversity conservation groups have, in turn, formed a Biodiversity Conservation Coordination Committee. This coordination committee has 11 executive members, of whom two are female. The constitution of the coordination committee requires that 33 percent of the members be female.

Table 3 presents survey findings on forest products use by respondent households. Users must buy a coupon for Nr^{p} 5–10 per season to collect fuel wood. The length of the season varies from 15 days to one month. Some CFUGs open the forest twice a year for fuel wood collection. Similarly, users need to pay Nr^{p} 5–10 for collecting fodder/grass during a season of about two months. Fuel wood collected during

Table 3: Use of Forest Products by Respondent Households

Forest products	Quantity of Forest Products Per Household			
	Group I	Group II	Group III	Group IV
Fuel wood *(bhari*/month)	12.17	9.31	8.5	4.75
Fodder *(bhari*/day)	0	0.56	0.33	0.56
Grass *(bhari*/day)	0.30	1.20	0.83	0.25
Timber (cubic foot/year)	0.67	1.79	7.00	16.25

Source: Field Survey , October 2004.

pruning/thinning of forest is distributed equally free of charge, using a lottery system among households that participate in thinning/pruning operations.

As in the case of Dovan and Lamahi, CFUGs in Mahadevpuri have generated funds through a variety of means, such as membership fees, permits for vehicles, and sale of fuelwood, timber, and thatch grass. These funds, together with support from TAL, are used to support forest conservation and community development activities. Jobs supported by CFUG funds, such as forest guards, have benefited poor households.

Contribution of Forests to Poverty Alleviation

Forest resources are clearly key components of rural people's livelihoods in Nepal, and offer great potential for contributing to poverty alleviation. While the government has made steps toward this goal, poverty alleviation requires a country to have sources of income and a mechanism for equitable distribution. Despite the great inequities in Nepal, programs such as community forestry and leasehold forestry have recognized the importance of addressing the needs of rural poor, and the MOFSC has in fact developed pro-poor programs. However, criticisms of community forestry in the past 20 years are valid, and more work on this issue still needs to be done. The poorest of the poor still lack access to the full potential benefits of community forestry. Nepal's government, however, recognizes these problems and is beginning to address them.

Community Forestry

Nepal is often looked at as the pioneer in community forestry. The Community Forest Program that began in the late 1970s expressed an explicit concern for meeting the subsistence needs of local farmers for firewood, fodder, leaf litter, and some small timber for agricultural implements. Since then, the Community Forest Program and other participatory forestry programs have incorporated local development objectives (Chhetri, Sigdel, and Malla 2001).

Much of the emphasis in assessing community forestry in Nepal has been placed on totaling the number of hectares handed over and the number of user groups formed, but not evaluating the contribution of forests to people's livelihoods. After 25 years of implementation, issues of equity exist within community forestry user groups. The poor do not receive an equitable distribution of goods and services, and in some cases contribute or sacrifice more than other members. As a result of several studies conducted on benefit sharing from community forests, government policy makers and donor agencies are well aware of this second-generation problem of equity.[12]

A few studies have also attempted to assess the contribution of community forests to poverty alleviation and concluded that community forestry has not made much impact on poverty alleviation. For example,

[12] MOFSC has recently formed a Gender and Equity Working Group. The members of this group include representatives from different departments and divisions of MOFSC, representatives from forestry projects, and NGOs such as The Federation of Community Forest Users and Himalayan Grass Roots' Women's Natural Resources' Management Network

Malla (2000) writes: "Overall, the community forestry intervention has had limited positive impact on the livelihood of rural households. The evidence suggests that some households, especially the poorer ones, have been affected adversely." For example, some community forestry groups have greatly restricted collection of forest products, and those that have most depended on the products (the poor) were the most adversely affected. They had to find alternative sources of fodder and fuel wood, often much farther away. Wealthier households have traditionally had the means to substitute (using their home garden forests) or purchase forest products. Many community forestry groups charge a flat fee (no sliding scale) when they sell products. In addition, community development activities that stem from CFUGs, such as roads, schools, and water taps, rarely serve the poor. Chhetri, Sigdel, and Malla (2001) have reached similar conclusions; however, community forestry as a whole does illustrate the importance of forestry to rural livelihoods and community development.

Kanel and Niraula (2004) conducted a study examining community forestry's impact on livelihood improvement by looking at 1,700 user groups in 12 districts. The study found that community forestry contributed to household livelihoods, community development, and good governance, while improving the environment. The authors estimate that within community forests, products worth about Nr^p 750 million (approximately US$10 million) are extracted and sold. CFUGs earn about Nr^p 914 million per year (US$12 million) from these products and other sources (fees, fines, grants) and expend about Nr^p 450 million per year (US$6 million). Community forestry user groups spent 46 million Nr^p (US$630,000) per year on employing local residents as forest watchers (often hiring the disadvantaged). Forestry, through CFUGs, contributed Nr^p 134 million per year (US$1.8 million) to community development through construction of roads, schools, school fees, water taps, health posts, and other infrastructure activities, and Nr^p 12 million (US$175,000) to pro-poor programs. This is in addition to the fuel wood people use for energy, the fodder people use for animal feed, leaf litter people use for compost, and food and medicines people collect from the forest.

Leasehold Forestry

In Nepal, the Leasehold Forestry Program was developed to alleviate the poverty of poor and marginalized groups, such as low castes and women. As of 2003, 1,729 leasehold forestry groups of nearly 12,000 households have been established in 14 districts in Nepal (IFAD 2003). The Leasehold Forestry Program, funded by the International Fund for Agricultural Development, provides an alternative to community forestry programs by providing degraded land to resource-poor villagers. The program, which started in 1993, was intended to provide resource-poor farmers with land to grow fodder and a small loan for purchasing livestock. Households could earn income by raising and selling goats and their products. Leasehold forestry brought MOFSC together with the Ministry of Agriculture, and agriculture development banks. User groups and multipurpose cooperatives were formed. The program has been adopted by MOFSC and is now a department within the ministry.

The Leasehold Forestry Program shows how forestry, in combination with other activities, has contributed to poverty alleviation. The program has enabled farmers to raise and sell goats, buffalo, and milk. In some areas, farmers increased their income by Nr^p 25,000 a year. Others earned money from planting and selling bamboo, cardamom, seeds, horticultural plants, and honey. In addition, 120 groups of several leasehold forestry groups each, and 18 multipurpose cooperatives were formed, enabling savings and microcredit activities among the participants.

Evaluators of the Leasehold Forestry Program note that, although hard to track, the Leasehold Forestry Program had a great impact on livelihood indicators, noting that increased livestock and income had a positive impact on nutrition. They also note that mothers saved labor and that more children were able to attend school.

The PRSP Progress Report (June 2006) indicated that a recent evaluation of the Hills Leasehold Forestry and Forage Development Project, begun in 1994, suggests that the program has been able to reduce poverty and empower low-income, landless groups. Leasehold forestry has helped to improve the living

standards of 30 percent of poor farmers, and enhanced the foundations for improved economic status. Exclusion of the poor and marginalized groups remains a problem but is improving[13].

Protected Areas

Protected areas include national parks and reserves. In some cases, national parks have allocated community forestry buffer zones that operate like community forests, allowing community members to use resources and user groups to use income (primarily from entrance fees) toward community development activities, such as building schools. In Chitwan, a CFUG has managed a buffer zone forest for tourism. The CFUG earns funds, primarily through elephant rides to see rhinoceroses, and canoe trips. The income from the forest and economic benefits from this tourism are great, and the disparity between the wealthy and poor has been amplified. The Bag Mara CFUG in Chitwan, for example, has not done a good job of addressing indigenous and landless people's needs.

Government-Managed Forests

Most of the government-managed forests are "managed" for protection, but in fact are not managed due to lack of staff and resources. If managed for timber production, much of the Terai could produce enough income to pay for the Nepal government's entire budget (Amit Lal Joshi, personal communication). Government-managed forests do contribute to people's livelihoods, although people use the forests illegally. When community forestry was first initiated, and many forests were closed to collection of goods, people turned to national forests for fuel wood and fodder. In the Terai, people have even settled in government-managed forests. Even though it is not acknowledged and the actual contribution is not known, government-managed forests are contributing to poverty alleviation.

Forestry and the MDGs

Forestry can and does contribute to the MDGs in Nepal. This case study and other donor work in forestry shows how forestry is contributing to the MDGs. Table 4 summarizes the findings. Forestry is an integral part of the farming system and livestock development. It is a source of income for many rural households that contribute to basic needs.

Table 4: Summary of Findings

Goal	Role of Forests	Current or Potential Role of CFUGs or Other Programs
Eradicate extreme poverty and hunger	Provides food and income	Allocation of land in forests for crops; leasehold provides land and livestock
Achieve universal primary education	Provides income	CFUGs build schools and provide scholarships
Promote gender equality and empower women	Provides income	Women's literacy
Reduce child mortality	Provides food, medicine, and income	CFUGs build health posts and provide training
Improve maternal health care	Provides food, medicine, and income	CFUGs build health posts and provide training
Combat HIV/AIDs, malaria, and other diseases	Provides medicinals	CFUGs build health posts and provide training
Ensure environmental sustainability	Protects air, water, biodiversity, and so on	Sustainable forest management
Develop a global partnership for development	Provides internationally traded goods and NTFPs	

[This is authors' analysis based on primary as well as secondary information]

[13] Information from PRSP Progress Report, June 2006, added by editor.

Conclusion

In rural Nepal, forests play an important role in people's livelihoods. Forests are a necessity for farmers raising crops and livestock, and provide a source of food, medicine, and fiber for rural populations. Nepal's PRSP does not overemphasize forestry, but mentions its importance and has identified poverty-related indicators to track. The government of Nepal and MOFSC, through their various programs, such as leasehold forestry, community forestry, and buffer zone forestry, recognize the importance of forest resources for local communities. Despite criticisms of and inequities in these programs, compared with other countries, Nepal is progressive in acknowledging the importance of forestry and poverty alleviation.

The donor community also acknowledges this importance. All forestry programs of major donors include "livelihoods," "income generation," "governance," and "pro-poor" language in the title of their forestry programs. Donors have recognized that forests provide one of the only renewable communal resources people can access. Forests are the only resource to which the landless have any access; in the mid-hills, there are few other opportunities, and community forestry has created sound local institutions through which other development (for example, health, education, clean water) can happen. If well managed and acknowledged, forests can play an even more important role. If managed for specific products, forests can yield significant revenue and can greatly contribute to poverty alleviation.

Degradation of forests hurts poor households more than rich ones. But, numerous examples also exist in which conservation of forests has hurt the poor more than the rich. Proactive policies and programs are needed to ensure that forest benefits reach the poor. This study observes that forests are beginning to make some contribution to augmenting physical, financial, human, natural, and social capital of some poor people. Forest-related programs have also to some extent helped empower women, although these programs have failed miserably to empower the poor and other marginal groups. The relatively few success stories of the really poor benefiting from forestry programs in buffer zones or leasehold forestry, however, suggest that participatory forestry programs must find effective ways to move from the community to the individual household or targeted groups within communities in order to play a meaningful role in poverty alleviation, while conserving the forests (Chhetri, Sigdel, and Malla 2001). Although this study has not found any examples in which forest programs have transformed the lives of poor people, many examples exist in which forests have helped poor households to cope with risks and vulnerability. Whether a community forest or a national forest managed for timber, the issue of ensuring equitable distribution of benefits from these resources remains.

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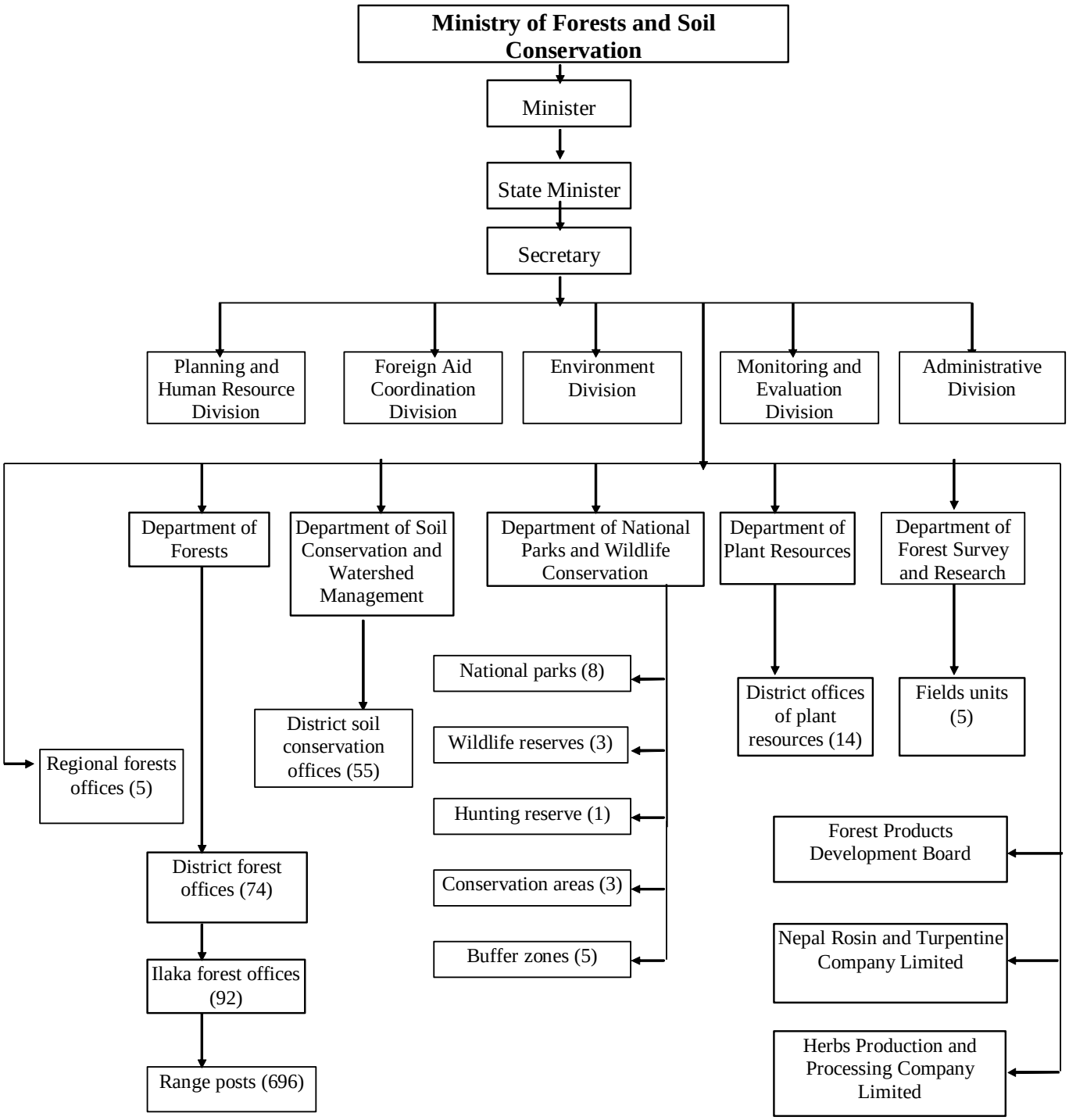
Appendix

Acronyms

CBO	community-based organization
CBS	Central Bureau of Statistics
CFUG	community forest user group
DDC	district development committee
DFID	Department for International Development
DFRS	Department of Forest Research and Survey
DNPWC	Department of National Parks and Wildlife Conservation
DOF	Department of Forest
GDP	gross domestic product
HDI	Human Development Index
INGO	international nongovernmental organizations
LFP	Livelihood Forestry Programme
MDGs	Millennium Development Goals
MOF	Ministry of Finance
MOFSC	Ministry of Forests and Soil Conservation
NGO	nongovernmental organization
NPC	National Planning Commission
Nr^p	Nepalese rupee
NESAC	Nepal South Asia Centre
NTFP	non-timber forest product
PRSP	Poverty Reduction Strategy Paper
TAL	Terai Arc Landscape
VDC	village development committee
WWF	World Wildlife Fund

Figure 3: Organizational Chart of the Ministry of Forestry and Soil Conservation



Source: Chhetri, Sigdel, and Malla 2001.