Capitalisation and Sharing of Experiences on the Interaction between Forest Policies and Land Use Patterns in Asia

Linking People with Resources

Volume 2: Technical Papers

ICIMOD

Partnership Platforms
Supplement

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About the Organisations

ICIMOD

The **International Centre for Integrated Mountain Development** (ICIMOD) is an independent 'Mountain Learning and Knowledge Centre' serving the eight countries of the Hindu Kush-Himalayas – Afghanistan 🇦🇫, Bangladesh 🇧🇩, Bhutan 🇧🇹, China 🇨🇳, India 🇮🇳, Myanmar 🇲🇲, Nepal 🇳🇵 and Pakistan 🇵🇰 – and the global mountain community. Founded in 1983, ICIMOD is based in Kathmandu, Nepal, and brings together a partnership of regional member countries, partner institutions, and donors with a commitment for development action to secure the future of the Hindu Kush-Himalayan region. The primary objective of the Centre is to promote the development of economically and environmentally sound mountain ecosystems and to improve the living standards of mountain populations.

The Swiss Agency for Development and Cooperation

The **Swiss Agency for Development and Cooperation** (SDC) is Switzerland's international cooperation agency within the Swiss Foreign Ministry. Together with other federal offices, SDC is responsible for overall coordination of development activities and cooperation with Eastern Europe, as well as humanitarian aid.

SDC employs a staff of around 550 people to carry out its activities in Switzerland and abroad, with an annual budget of CHF 1.3 billion (2004). The agency undertakes direct actions, supports the programmes of multilateral organisations, and helps to finance programmes run by Swiss and international aid organisations in the areas of i) Bilateral and multilateral development cooperation, ii) Humanitarian aid, including the Swiss Humanitarian Relief Unit (SHA) as well as iii) Cooperation with Eastern Europe.

The aim of development cooperation is to alleviate poverty by helping people in partner countries to help themselves. Development activities focus on promoting economic and governmental autonomy, improving production conditions, helping to solve environmental problems, and providing better access to education, basic health care and culture for the most disadvantaged groups in society. Bilateral development cooperation concentrates on 17 priority countries and 7 special programmes in Africa, Asia and Latin America. Approximately 750 projects are currently in operation. At the multilateral level, SDC collaborates in particular with UN organisations, the World Bank, and regional development banks.

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Volume II: Technical Papers

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foreword

Productive and sustainable use of sloping land and community-based natural resource management (CBNRM) are increasingly recognised as two major options across Asia both in natural resource sectors and in cross-cutting strategies such as poverty reduction, environmental management, and rural development. Since the early 1980s, decentralisation of management has become the dominant policy paradigm in natural resource management in Asia and the basis for many donor supported CBNRM development projects, which are being implemented with varying degrees of success. A common feature of these projects and regional programmes is the decisive influence of policies on the productivity and sustainability of land use, particularly in relation to forestry and agroforestry interventions. However, there is no effective mechanism for interlinkages or exchange, and a great deal of duplication of efforts is observed whether projects have been going on for over a decade or are just starting.

Strong cooperation between countries and organisations working in CBNRM must be a priority in order to share and capitalise on the valuable experiences gained. In Asia, the Swiss Agency for Development and Cooperation (SDC) is supporting projects on natural resource management in forestry, rangelands, soils and soil nutrients, water, and upland development, as well as supporting regional and international centres of excellence like the International Centre for Integrated Mountain Development (ICIMOD) and the Regional Community Forestry Training Centre for Asia and the Pacific (RECOFTC), thus the opportunity to take forward the concept of cooperation seemed ideal. To this end, a regional workshop entitled 'Capitalisation and Sharing of Experiences on the Interaction between Forest Policies and Land Use Patterns in Asia' was chosen for the beginning of a larger knowledge management initiative within SDC East Asia Division and its partners. The workshop was held in Kathmandu Valley in Nepal in January 2005 in partnership with ICIMOD, which provided organisational, editing, and publishing support, and supported by RECOFTC and German Technical Cooperation (GTZ). The main aim was to improve policy and institutional frameworks for comparing and scaling up best practices in CBNRM in the region

The community forestry management policy in Nepal clearly demonstrates how understanding of the role of forests, as well as of the social and environmental goods and services that they provide, has changed along with understanding and appreciation of the roles and responsibilities that local people can shoulder if given the opportunity and appropriate supporting policies and programmes. It is a unique example of transferring the rights for natural resource use to the community, and shows how essential the creation of an enabling policy environment conducive to peoples' participation and the creation of locally owned democratic institutions are for the sustainable management of forests and other natural resources. Policies are the indispensable instruments that provide the legal framework to merge and ensure the safeguarding of local interests related to sustainable and improved livelihoods and national, regional and global interests of protection and conservation. They are also indispensable in cross-cutting 'second-generation' issues like governance, gender, equity, and access/distribution to disadvantaged groups – which are SDC's strategic development priorities.

ICIMOD, SDC, RECOFTC, and GTZ have been associated with community forestry since its early days through facilitating policy dialogue; sharing of information and knowledge among foresters, users, and advocacy groups; and support of projects and programmes across Asia. However, as the presentations from participants in this workshop have clearly shown, community forestry is but one name for a particular form of CBNRM, while other types of natural resources with other ecological and socioeconomic conditions such as rangelands, wetlands, parks, and protected areas play an equally important role for sustainable livelihoods and poverty alleviation in other areas. Thus the objective of this workshop was to examine how the lessons learned in community forestry could help to improve policy and institutional frameworks and be transferred to other countries in Asia that are at different stages of implementation of CBNRM concepts and have yet to operationalise their plans on a significant scale.

When the topic for the workshop was first chosen, the wide interest this workshop would create was neither expected nor anticipated. The large number of participants from a wide variety of organisations and countries is a clear demonstration of how important this area has become to a wide number of stakeholders from government agencies to research organisations and civil societies across the region.

We from SDC and ICIMOD consider ourselves fortunate in the wide interest this workshop has created and the keen participation from participants representing stakeholders from so many areas and levels of CBNRM implementation and so many countries. We feel confident that the participants were able to truly capitalise on the knowledge they shared on policies, processes, and institutional and technological innovations by adapting them to their own specific situations, as well as profiting greatly from the new partnerships and collaborations they entered into during the course of the workshop. With this in mind, we hope that the publication of these two volumes of workshop proceedings and technical papers will continue to serve as a valuable source of information and inspiration for everyone working in CBNRM.

We wish to acknowledge the valuable support and hard work of all those at ICIMOD and SDC who helped make the workshop a success, especially Dr. Pema Gyamtsho, the workshop coordinator. We also wish to thank His Majesty's Government of Nepal for generously extending its hospitality in welcoming all participants, without which it would have been impossible to host this workshop.

J. Gabriel Campbell   Walter Meyer
Director General, ICIMOD   Head, East Asia Division, SDC

acknowledgements

More productive and sustainable use of sloping land and community-based natural resource management (CBNRM) are being recognised increasingly as major options in a range of natural resource sectors in Asia. CBNRM is also recognised as a useful mechanism in cross-cutting strategies; for example in poverty reduction initiatives, environmental management, and rural development. The workshop held in Godavari, near Kathmandu, Nepal, from 26-28 January 2005, brought together over 60 participants; they included policy-makers, project implementers, and representatives of local communities from Bhutan, China, India, Mongolia, Nepal, Pakistan, and Thailand; and representatives from two donor agencies – the Swiss Agency for Development Cooperation (SDC) and German Technical Cooperation (GTZ)—and three international organisations – the International Centre for Integrated Mountain Development (ICIMOD), the Regional Community Forestry Training Centre for Asia and the Pacific (RECOFTC), and the Centre for International Forestry Research (CIFOR) – to share the lessons learned from community forestry in Nepal and to explore opportunities for using them in other countries and for other natural resource types.

The workshop included five plenary sessions and two working group sessions. Papers were presented on the regional and national status of community forestry and other initiatives in community-based management of natural resources, for example: leasehold forestry and parks and protected area management in Nepal; social forestry in Bhutan; Guzara forestry in Pakistan; wetlands in China; and rangelands in Mongolia. These papers examined and evaluated different approaches, models, and institutional arrangements used in community-based natural resource management (CBNRM) in the region. While some papers focused on national-level policies and institutional arrangements for CBNRM, others covered micro-level experiences in implementing CBNRM, including its progress, process, effects, impacts, issues, and challenges.

The papers and the group deliberations acknowledged that, although community forestry programmes have made significant inroads in the region, they have not yet reached the scale desired and are confined to a few areas. At the country level, Nepal reported tremendous progress with a recorded 1.1 million ha of forests under the programme managed by some 13,600 community forest user groups (CFUG). Annually these CFUGs earn NRs 913 million which are reinvested either in forestry or in other community development projects. This has been made possible by an enabling policy and legislative support that was based on learning by doing and linking policy development to actual experiences from the field. It was also highlighted that the CFUGs have become robust institutions and, even in the present conflict situation in the country, they are still functional and serving as a platform for all socioeconomic development at the grass-roots' level. Notwithstanding, the community forestry programme is now facing second generation issues such as sustainability of interventions from various projects, governance, and livelihoods. There was tacit acknowledgement that the poorest of the poor within the CFUGs have not benefited enough from the programme.

The leasehold forestry programme in Nepal was seen as an avenue for addressing the needs of the poor and marginalised groups through targeted allocation of barren forestland on long-term lease to these groups and through assisting them to grow

multiple-use trees and fodder plants to support their livelihoods. The programme is still young, but early indications were reported to be very positive and there is now a growing recognition of its use as a strategy to mitigate poverty in remote mountain areas. Similar results were reported by the social forestry programme in Bhutan from the pilot sites where, contrary to popular concerns that the communities may over-harvest trees, it was found that, when the forests were allotted to them, communities were more conservative about using the trees than they were when the forests were under state control.

The paper from Pakistan on Guzara forestry showed that although enlightened policies on forest tenure and use rights were formulated, they were not implemented effectively in the field due to inherent problems such as lack of institutional capacity, tenure overlaps, and sociopolitical conflict of interests. Nepal's experiences in managing parks and protected areas, as well as China's experience in conserving wetlands, have demonstrated that conservation without the participation of local people has little chance of success. Both highlighted that indiscriminate investments in tourism and other economic sectors not only jeopardises the survival of important flora and fauna but also the livelihoods of local people. Mongolia's case study on rangeland management emphasised the need to promote collaborative management in the use of natural resources; in the last decade the country's vast rangelands have suffered rapid desertification due to a 'free for all' system of use, following breakdown of the collective system that existed under the socialist regime prior to the 1990s.

The workshop recommended that the capacity of national agencies dealing with forests and other natural resources for policy analysis and advocacy should be strengthened and that periodic reviews of laws and policies should be undertaken to identify gaps, limitations, ambiguities, and inconsistencies. The workshop proposed that policy and institutional barriers to marketing of community forest products and affecting fair sharing of benefits needed to be identified and removed. The workshop also strongly recommended that policy development should be based on research and lessons learned from pilot practices in the field, and that the management of a particular resource should be linked to wider concerns of socioeconomic development and the ecology. The need to maintain flexibility in policies and laws to allow room for innovations at the community level was identified as a key ingredient for success. The workshop also recommended that networks of practitioners should be established or strengthened to facilitate exchange of information and experiences at various levels – local, national, and regional – and also called for increased collaboration among international research and development agencies such as ICIMOD, RECOFTC, and CIFOR and donors such as SDC and GTZ.

The proceedings and related materials from the workshop are presented here in two volumes. Volume I contains the rationale and objectives of the workshop; the summaries of the presentations and working group discussions; and the outcome of the workshop. This volume is intended for those who are interested in obtaining a quick picture of the status of community forestry and other community-based resources and what the workshop achieved in terms of facilitating useful dialogue. In Volume II, selected full papers on the various topics are presented so that detailed information on various aspects of community forestry, from policies to practices and challenges as well as opportunities for exchange of knowledge with other related land-use systems in the region, can be made available to all who have a stake in this exciting movement – community-based natural resource management.

acronyms and abbreviations

CBNRM	community-based natural resource management
CF	community forestry/community forest
CFMG	community forestry management group
CFUG	community forestry user group
DDC	district development committee
DFO	district forest office/district forest officer/divisional forest office
EU	European Union
FAO	Food and Agriculture Organization
FECOFUN	Federation of Community Forestry Users, Nepal
GTZ	German Technical Cooperation
HKH	Hindu-Kush Himalayan
ICIMOD	International Centre for Integrated Mountain Development
IFAD	International Fund for Agricultural Development
IUCN	World Conservation Union
JFM	joint forest management
MPFS	Master Plan for the Forestry Sector
NGO	non-government organisation
NRM	natural resource management
NW	northwest
NTFP	non-timber forest product
NWFP	North West Frontier Province
PFM	participatory forest management
PRSP	Poverty Reduction Strategy Paper
RECOFTC	Regional Community Forestry Training Centre for Asia and the Pacific
SDC	Swiss Agency for Development and Cooperation
SNV	Netherlands Development Agency
SWOT	strengths, weaknesses, opportunities and threats
UNDP	United Nations Development Programme
VDC	village development committee
WWF	World Wildlife Fund

Currency Equivalent

In 2004, US$1 = NRs 70 approx.

Notes
(i)   The Nepalese calendar year (B.S) runs from mid April to mid April. Unless otherwise stated, year ranges written in the form 2005/06 denote a single calendar year.
(ii) The fiscal year (FY) of the Nepalese Government ends on 15 July. FY before a calendar year denotes the year in which the fiscal year ends. (For example, FY2000 begins on 16 July 1999 and ends on 15 July 2000).
(iii) Acts and Regulations are cited under the name of the ministry from which they originate. In Nepal the official version of Acts and Regulations is published in the Nepal Gazette. Some Acts and Regulations are published by other government agencies in English translation.

contents

Advances in Community-based Natural Resource Management in the Asian Region

Community forest provides the needs of local villagers

Pema Gyamtsho

Interaction between Forest Policy and Land Use Patterns

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Abstract

Switzerland, through the Swiss Agency for Development and Cooperation (SDC), has been involved with community forestry in Nepal since its inception in the early eighties. Persistent financial and technical support to influence policies and build the capacities of forestry officials and community organisations has led to the reversal of land degradation and increasing poverty, features which became strongly associated with Nepal in the seventies and eighties. The protection and improvement of the vegetation cover of fragile slopes under the community forestry programme has led to the increased productivity of land; and to providing more employment, income for rural households, and improvements in their livelihoods. A very crucial factor in this success was community organisation and women's involvement. This degree of organisation and inclusion is a development that was not considered possible by many, including the author, when he was working in the Nepalese hills in the seventies. Overall, forest policy and community-based forest management have led to improved incomes, food security, and health for local communities, at the same time enhancing the conservation of biodiversity and the general condition of the environment. This experience in Nepal conclusively shows that enabling policies that entrust and empower communities to manage their resources are critical for sustainable development of people and the protection of their environment.

Introduction

Why is Swiss Development Cooperation (SDC) so keenly interested in the interaction between forest or land-use policies and land-use patterns? Our collaboration in hill agriculture, mountain development, and community forestry in Nepal and our experiences in sloping land management in South and East Asia showed us the decisive role these policies have on land use, on exploitive and on more sustainable use. Why is it most appropriate to hold this workshop here in Nepal? The presence of the International Centre for Integrated Mountain Development (ICIMOD) and the Regional Community Forestry Training Centre for Asia and the Pacific (RECOFTC) here is a good reason. A stronger reason is that Nepal, with its population pressure, deforestation, and land degradation provided one of the most influential domesday scenarios for the Earth Summit in Rio in 1992. In the 1980s, Nepal was the country with the highest deforestation rate worldwide. And, over the past few years, Nepal most likely has one of the highest reforestation rates worldwide. What made the difference? I want to highlight the importance of Nepalese forest policies; and add that Nepal has played a pioneer role in community forestry. It has enlightened leaders, such as Dr. Tej Bahadur Mahat, who permitted the Thokarpa community to make – if we oversee indigenous practices – the first, new experiences in community forest management, and who later played a key role in the renewal of forest policy and forest legislation. We are delighted to be here to contribute to this exchange of experiences and common learning. This introduction reflects SDC's interest and insights into

Nepal's forestry policy and management of sloping land and relates to other experiences in the region.

SDC's involvement

SDC's engagement in forestry development in Nepal dates back to the 1970s in the Dolakha, Sindhupalchok, and Palpa districts, and presently consists of the Nepal-Swiss Community Forestry Project in Dolakha, Ramechhap, and Okhaldhunga and collaboration with RECOFTC. Community forestry is one of the most successful natural resource management (NRM) activities in Nepal, combining the efforts of His Majesty's Government, non-government organisations (NGOs), communities, and private enterprises. By and large, community forestry has reversed the processes of forest destruction and degradation to productive and sustainable use. Ad hoc and destructive collection of fuel, timber, and other forest products has decreased considerably, as have forest grazing and slash and burn practices. Forests are closed, 'socially fenced', protected, and managed more intensively in a more productive and sustainable way.

Evolution of forestry policy in Nepal

Nepal, being a hilly and mountainous country, has a very sensitive environment. Population increase has led to excessive extension of agricultural land through encroachment of forests on sloping and steeper and steeper land. From 1981-1985, Nepal was reported to have the highest deforestation rate in the world – 4.1% per annum (World Resources Institute). Overgrazing and deforestation led to a sharp decline in overall biomass production.

The enactment of the Private Forest Nationalisation Policy in 1957 marked the beginning of a national forest policy in Nepal. The policy was formulated with the good intention of using and protecting the forests better, and of using forests for national interests and public welfare; but the policy could not be properly implemented. The capacity and will for proper implementation were lacking. The policy undermined the rights of local communities who had been managing and using the local forest resources for subsistence according to their traditional systems. The policy resulted in the destruction of vast tracks of valuable forestland. Nepal's forests took the route of the 'tragedy of the commons'.

Under the Forest Policy of 1961, attempts were made to protect, manage, and use the forests for the improved economic welfare of the people and the country. Accordingly, Nepal's first Forest Act was promulgated and enacted in 1961. This Act concentrated on state ownership of, and authority over, forests and all land except agricultural land. It advocated that all other land, apart from agricultural land, was to be treated as forest. Thus the Act encouraged the conversion of more forest into agricultural land to claim that the land constituted private agricultural property. At that time the deforestation rate was extremely high. Officially, the national forest cover declined from 51% in 1950 to 45.6% in 1964.

When the Special Forest Policy 1967 was promulgated, all forest offences, including forest encroachment, were treated as state crimes. District forest officers were authorised to put offenders in jail. However, deforestation did not decrease. In 1976, the National Planning Commission formulated the National Forest Policy with the objectives of maintaining and restoring the ecological balance through reforestation and watershed management programmes. The problems of encroachment and

deforestation were not properly addressed during this period either, and forest area continued to decline from 45.6% in 1964 to 35.7% in 1977.

Through the legislation of the sixties, the local communities, the traditional custodians of the forests in the hills and mountains, lost their authority over forest management. In 1978, the Government of Nepal reintroduced the concept of community forestry to involve the local communities in forestry. The first experiments in community forestry were in Sindhupalchok district. Since forest law didn't provide any scope for community management, the District Forest Officer of Sindhupalchok, Tej Bahadur Mahat, took a very unconventional and courageous decision. He tolerated, enabled, and finally encouraged a village initiative under the Decentralisation Act. In 1989, the Government of Nepal formulated a long-term forestry policy called the 'Master Plan for the Forestry Sector' which opened the way for community forestry. In the policy, community forestry was given top priority. The Forest Act of 1993 and Forest Regulations of 1995 were promulgated to give the forest policy legal status and to facilitate field implementation.

Impact of policies

Figure 1 shows the Doomsday scenario of the seventies. It depicts the negative impact and consequences of population pressure and a centralised, poorly implemented forest policy. Increasing population pressure led to increased deforestation and overgrazing of forests, triggering high precipitation runoff, soil erosion, and inundation. This in turn negatively affected the availability of food and water and resulted in poor health, poor human productivity, and the destruction of infrastructure downstream. Additionally, land and forest degradation caused extensive loss of biodiversity and alteration of habitats. Ultimately, this led to natural resource degradation and increased poverty. Note that in the scenario in Figure 1, all interactions are negative and there are a number of vicious cycles.
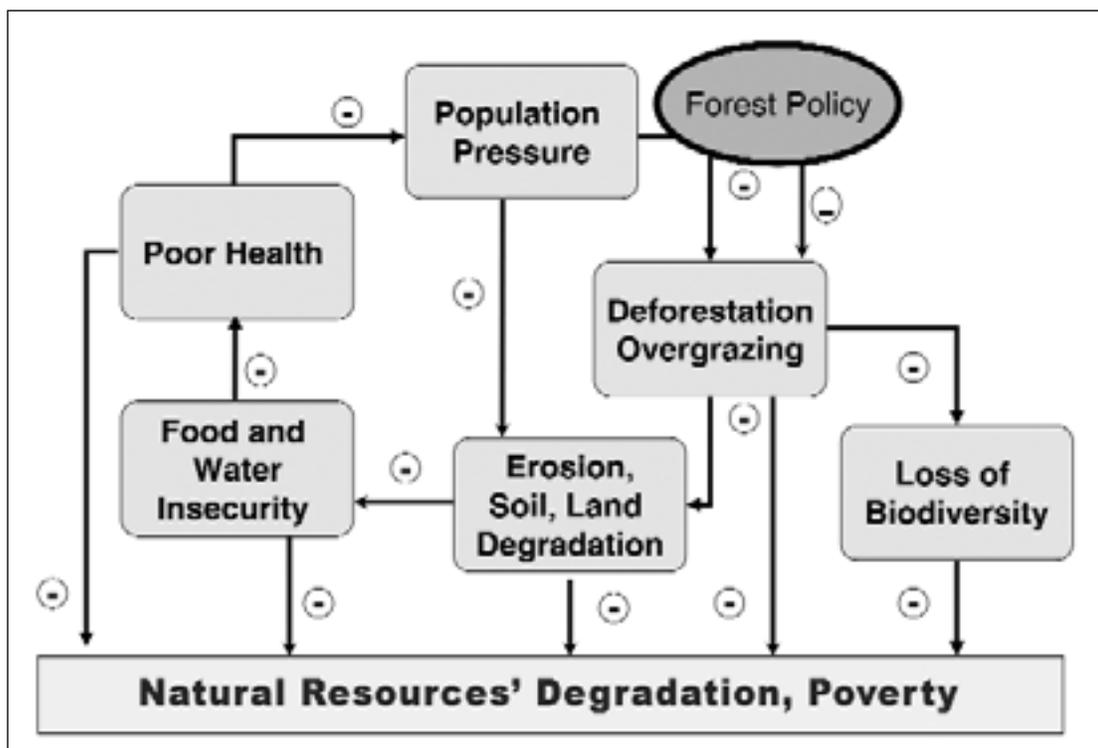
Figure 1: Centralised forest policy leading to deforestation and land degradation

The land-use system we can now observe in large parts of the Nepalese hills and mountains is a completely different one (Figure 2). Community forestry is at its heart. The new forestry policy and legislation encouraged it. A decisive factor in this was the change in livestock management, from free grazing of fields (in the dry season) and forests to stall-feeding. An important pull factor here was milk marketing and market access, often based on investment in infrastructure. Cows were replaced by improved buffaloes. Schooling was given priority over herding. Stall-feeding not only removed grazing pressure on forests, gullies, and common land, it also increased the soil fertility of agricultural lands through improved use of manure and nutrient cycling. The control of cattle changed the landscape, allowing trees and bushes to grow on field borders, gullies, and roadsides; and it opened the way for very intensive and productive agroforestry systems. The protection and improvement of vegetation cover also led to improved water supplies to households in terms of more and cleaner water. In addition, the availability of water in the dry season allowed women to increase vegetable production and earn more income. The increased productivity of land provided more employment and income for the increased population and contributed to improved livelihoods. A very crucial factor was community organisation and women's involvement. This degree of organisation and inclusion is a development I certainly did not consider possible when I was working in the Nepalese hills in the seventies. Overall, forest policy and community-based forest management have led to improved incomes, food security, and health for local communities, at the same time helping the conservation and enhancement of biodiversity and much more sustainable use of a very fragile ecosystem.

This experience in Nepal conclusively shows that user rights are of utmost importance for the productive use of sloping land. There is ample evidence that this is the case in other countries where SDC is engaged. Bhutan and Vietnam recently have adjusted forest legislation to encourage community forestry. The Democratic People's Republic
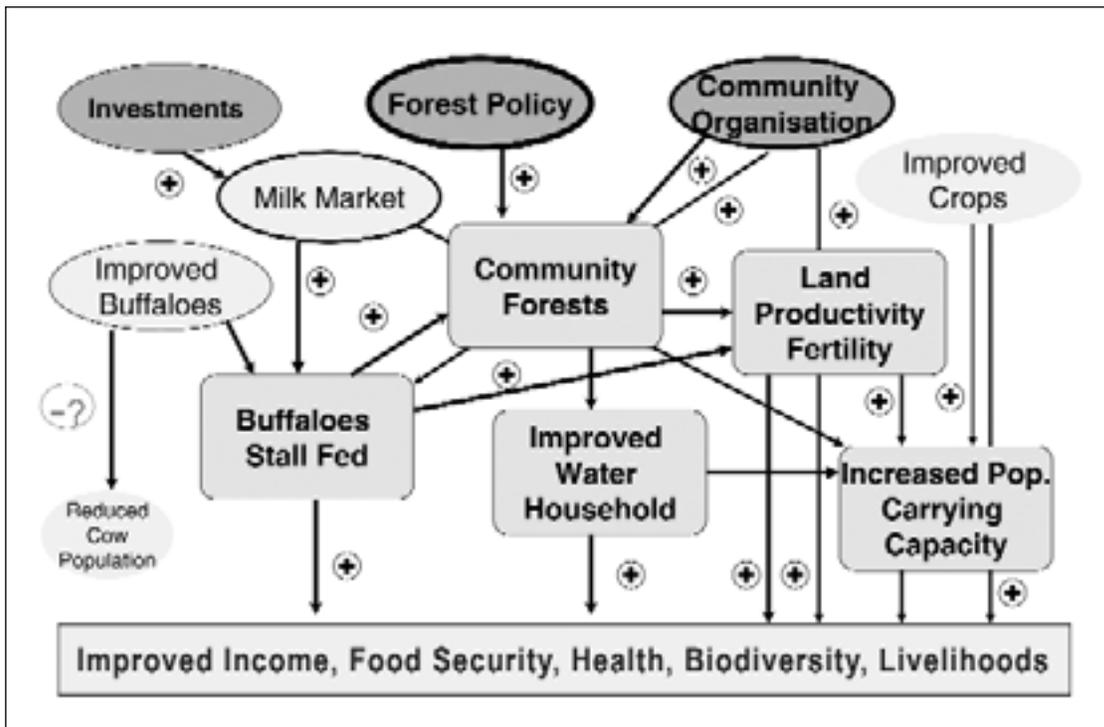
Figure 2: Policies leading to more productive and sustainable land use in the Nepal hills

of Korea still has a forest regulation similar to the one Nepal had in the fifties, leading to extreme deforestation and erosion. In collaboration with SDC, the government is now supporting experiments in community forestry. Similarly, in Mongolia, widespread overgrazing of pastures is the result of ill-defined user rights, a classic case of the 'tragedy of the commons'. Experiments in community management and social fencing should open the way to more productive and sustainable pasture management.

Policy implications

There is increased awareness now about the need to understand the implications of policies at different levels, from the local to the global. Global policies, such as the World Trade Organisation's (WTO) policies on trade and the European Union's (EU) policies on agriculture have important bearings on national and local economies. Hence, national polices on forestry as well as on investments and infrastructural development need to be cognisant of these international policies if economic benefits are to be realised and negative consequences mitigated. National policies that support good governance and decentralisation have far greater chances of building national capital to compete in a globalised world. At the local level, policies that address the access to resources and equitable distribution of benefits from local resources are of great importance in improving the income and standards of living of communities.

To conclude, there is great potential for addressing poverty and environmental concerns through improved national and local policies. Development partners need to place more emphasis on contributing through adequate policies to an enabling environment.

Advances in Community-based Natural Resource Management in the Hindu Kush-Himalayan Region

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Abstract

The Hindu Kush-Himalayan region is among the most fragile and biodiversity-rich areas in the world. It is home to millions of poor and marginalised people who depend on its biological resources for their subsistence. In recent years, there has been unprecedented loss of biological resources as a result of land use change, change in tenure and management regimes, fragmentation of families, external market forces, and so on. The major challenge to the people living in the HKH region is to use these dwindling resources in a sustainable manner. Among the eminent community-based natural resource management practices that have evolved during the recent past are joint forest management in India and community forestry and leasehold forestry in Nepal. These are augmented by other approaches such as co-management of rangelands, enterprise-based, community-involved biodiversity conservation, and participatory transboundary landscape approaches to development and conservation. The notion that 'conservation and management of natural resources are impossible without people's participation' is now becoming a fundamental principle of CBNRM. Since the 1980s, decentralisation and devolution of authority for management of natural resources are being seen across the HKH region, with participatory management approaches evolving as a popular means of carrying forward this movement. CBNRM is increasingly recognised as a visible approach that enhances conservation and sustainable use. However, these initiatives are portrayed as islands of success without much effort to upscale them. The paper highlights some of the recent advances in community-based natural resource management in the HKH region.

Introduction

The Hindu Kush-Himalayan (HKH) region extends from west to east over Afghanistan, Pakistan, India, China, Nepal, Bhutan, Bangladesh, and Myanmar. Approximately, 39 per cent of the HKH region consists of pasture, 33 per cent is covered under protected area networks, 21 per cent is forest, and five per cent is agricultural land. It has an area of 4.3 million sq. km. that sustains about 150 million people and impacts the lives of three times as many people living downstream. In terms of natural resources, parts of the HKH region form one of the ten mega-centres of biodiversity in the world, endowed with a rich variety of gene pools, species, and ecosystems of global importance. The HKH region is not only important as a habitat for plant and animal species, it also harbours a large number of rare and endemic species and is the home of many historical ethnic communities such as the Wakhis, Tibetans, Sherpas, Kirats, Bhutias, Lepchas, and many others with diverse sociocultural values. The long history of human presence in this fragile ecosystem and maintenance of its fragility are indicators of compatibility between satisfaction of community needs through traditional practices and biodiversity conservation. Traditional natural resource management systems such

as Sokshing* in Bhutan; Dzumsa⁺ in Sikkim; nomadism amongst the Wakhis, Ladhakis, and Tibetans; and Kipat• systems amongst Kiratis and Limbuwans are among the effective traditional conservation measures that address 'sustainability'. This suggests that, in the past, there was a good balance between biological resources and human needs.

However, the ever-increasing population and its needs have imparted immense pressure on available resources. Despite the ecological and economic importance of the biological resources of the HKH, the region has been subject to severe stress and continues to face multiple threats (Brooks et al. 2002). In recent decades, combinations of forces – especially population growth, infrastructure and trade expansion, and technology change – have exerted increasing demands on natural resources. At the same time, nationalisation of natural resources and centralisation of resource management authorities – which caused a loss of arrangements for customary use – have failed to achieve sustainable management of natural resources, especially for common property resources such as forests, upland pastures, and water that are accessed and used by multiple users. The result has been a radical acceleration in degradation of natural resources and increased insecurity of rural livelihoods.

Ecosystems and economy are interlinked in mountain societies where people remain primarily dependent on natural resources. Broadly, five types of farming systems are operative in the HKH region. They are: 1) specialised pastoral systems in which livestock are the source of living; 2) mixed agro-pastoral systems with livestock and small-scale agriculture; 3) cereal-based hill farming systems; 4) shifting cultivation as subsistence farming; and 5) specialised commercial farming systems such as horticultural crops and tea (Sharma and Kerkhoff 2004). Integrated use of these major farming systems provides food, water, fibre, medicines, energy, housing, and cash-generating products upon which the mountain people depend for their survival. Moreover, the environmental services provided by these natural assets are the basis for the physical security of mountain people living in these areas and ensures the sustainability of their production systems into the future. However, sole dependency on these natural resources is mainly due to limited options. In recent years these resources have been facing tremendous pressure from a burgeoning population, with changes in lifestyle and land-use patterns and, most importantly, with changes in management regimes. For example, most of the productive pastures controlled by the community as common pool resources have turned into degraded and unproductive lands. Forests have been lost to different land-use types, often due to unsustainable levels and ways of exploitation. Therefore, depletion of natural resources has directly aggravated the pressures on rural livelihoods through shortage of natural resources such as fodder, firewood, and timber.

In recent years, there has been a growing concern for these dwindling natural resources. Numerous initiatives have been taken at local, national, and regional levels within the HKH countries. During the course of seeking solutions to these issues, two distinct outcomes (amongst many) were seen from local, regional, and global initiatives. They are a) appreciation of indigenous knowledge of natural resource management, and b) recognition of participatory community-based natural resource

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* Sokshing management is an indigenous practice that has evolved over many years whereby rural agricultural households and communities maintain certain patches of village forest for collection of leaf litter to produce farm manure.
⁺ Institutional arrangements for natural resource management by the pipon (village head).
• Land inherited from one's forefathers with rights in Nepal.

management (CBNRM) practices involving local communities and giving due recognition to various forms of governance. Some eminent CBNRM models that have evolved during the recent past are joint forest management (JFM) in India and community forestry (CF) and leasehold forestry in Nepal (Sharma and Chettri 2003a, 2003b). These are augmented by co-management of rangelands, enterprise-based community-involved biodiversity conservation, and participatory transboundary landscape approaches in development and conservation. This paper highlights some recent advances in CBNRM practices in the HKH region that enhance our understanding and enable us to draw appropriate options for policies, technologies, and institutional arrangements for the development and conservation of natural resources.

Advances in CBNRM in the Hindu Kush-Himalayas

Participatory forest management

The notion 'conservation and management of natural resources are impossible without people's participation' is now becoming a fundamental principle of CBNRM. Since the 1980s, decentralisation and devolution of authority for management of natural resources are being seen in government efforts across the HKH region. In 1992, The United Nations Conference on Environment and Development (UNCED) placed a premium on people's participation and promotion of a conceptual shift in both natural resource management and conservation. In response, participatory forest management approaches evolved as popular means. Experiments in such approaches began as early as the 1970s. JFM in India, CF and leasehold forestry in Nepal, and CBNRM in Bhutan are often cited as successful examples of regeneration of degraded forests and effective management of existing natural resources. In all of these examples, community-based natural resource management was seen as an instrument that enhances conservation and sustainable use. Technologies and science for natural resource management are important, but sustainable harvesting processes and equitable distribution of benefits among the communities are more challenging and perhaps of greater importance.

The JFM approach that started in the early 1970s in Midinapur district of West Bengal was an important breakthrough in the management regime and has been widely accepted as a promising approach to resource management (Campbell 1992; Poffenberger and Singh; 1989; Sarin 1993). In essence, JFM involves formal partnerships between foresters, villagers, and government authorities through formation of forest protection committees for the protection and management of state forests. Although there are many variations of JFM, the core idea is that in exchange for their cooperation and assistance, villagers are given free access to non-timber forest products (NTFPs) and entitled to a share of profits from the sale of the regenerated trees when they are finally harvested. This practice received legal support when a national JFM resolution was adopted in 1990 by the Government of India. This new approach to forest management emphasised the shared responsibility for management and sharing of profits with local communities. JFM represents a significant policy shift and the changes are (a) from production for commercial marketing and to generate government revenue, to production to fulfil the needs of forest-dependent communities; (b) from an exclusive focus on timber to attention to NTFPs (firewood, fodder, grasses, leaves, medicinal plants, wild edibles, and others) that are important for the livelihoods of forest communities; (c) from monoculture single-layered forests (of commercially valuable species) to multi-layered mixed forests that include a diversity of trees species; (d) from plantations of a similar age (for ease in harvesting) to plantations of

diverse ages (for a sustained supply of timber and other products to meet community needs); and (e) from custodial management through policing to participatory management.

Information and data from West Bengal in India indicate that these changes have produced results. Forest cover has increased, timber production has increased, conflict between foresters and communities has decreased, and the yield of NTFPs has increased (Joshi 1999). Although JFM undoubtedly represents a change in the state's approach to forest management, there are still two sets of issues that need to be addressed (Saighal et al. 1996; Roy 1992; Saxena 1992). The first set is conceptual; for example, to what extent do communities have economic (as opposed to subsistence) rights to forest produce? The second set of issues relates to the practical problems of managing the JFM programme: assigning forest areas to communities, developing systems for conflict resolution, dealing with different administrative and forest boundaries, and increasing women's participation. JFM is more challenging in mountain areas, as experienced in the hills of North Bengal where growth of forests is much slower than elsewhere, thus testing the patience of communities who have to wait to share the economic benefits.

Community forestry in Nepal is one of the commonly-cited success stories where policy considers its intervention as a process that essentially involves handing over use rights of government-owned forests to indigenous groups of people who customarily hold the de facto use rights of such forests (Gilmour and Fisher 1991). Community forestry gained impetus after 1990 and now covers 9112 sq.km, is managed by 11,595 community forest user groups (CFUG), and benefits 1.3 million households. The area under community forestry in Nepal was 15.6% of the total forest area in 2002. Management by CFUGs of forests has resulted in recovery of the vegetation to form reasonable forests in the hills. This is a significant achievement, because, without forests, most of Nepal's rich biodiversity would have been lost. Local extinction of species has been prevented, habitat corridors created, and successive stages of forests developed. Wildlife sightings have increased, as have livestock and wildlife damage to fields. Although the CF approach has improved livelihoods in many cases, it still has its shortcomings; for example, in inclusion and full participation of traditional users and distribution of benefits to them. Key components of community forestry that affect people's livelihoods are forming the user group, making decisions, and distribution of benefits. Social equity refers to unequal power relations between the rich and poor, high and low castes, women and men, and so on, characterised by both cooperation and conflict. Community forestry should ideally address such power relations with respect to forest management and use as forest user groups gradually gain maturity and experience achieving sustainability. This has yet to happen in most of the community forestry areas.

As the CF programme matured and began progressing, the government of Nepal began other forestry development activities, including leasehold forestry. The 1993 Forest Act provided legal authority for leasehold forestry to assign forest land on a contractual basis to landless people. A project was designed to support the poor families of the mountain region of central Nepal where more than 40% of the population lived below the poverty line with less than 0.5 ha of land per capita for cultivation. The project was conceived to help poor communities by leasing forest lands and is being implemented with support from the International Fund for Agricultural Development (IFAD) and Dutch technical assistance through the Food and Agriculture Organization (FAO). While functioning in ten mountain districts as a project, it is now a national programme. Like

CF, leasehold forestry is contributing to forest development and management of the fragile mountain region by the communities. This is helping in greening the mountains, degradation has decreased considerably, areas are protected, and biological diversity has recovered (Joshi 2000).

All these approaches to participatory forest management are considered to be successes in many respects, especially in terms of evolving shared responsibility for management and in terms of sharing profits with local communities. Second-generation problems are evident in all these approaches, and these need careful handling as they mostly relate to equity in access and benefit-sharing issues. In all of the three approaches to participatory forest management, the planning and design do not specifically consider biodiversity assessment; therefore the impacts in terms of biodiversity are mostly by-products or consequences of community involvement in forestry programmes. Biodiversity maintenance and enrichment are visible in these community-managed, mountain forest areas.

Co-management of rangelands

Rangelands, pasture, and livestock directly or indirectly support the livelihoods of thousands of communities in the HKH region. Numerous ethnic groups – including nomadic and semi-nomadic communities – live in these rich but fragile ecosystems and depend on the pasture land and livestock for their subsistence, mainly because of limited agricultural options. However, acute water crises, limited foraging ground, fodder crises, spread of livestock disease, and livestock depredation by wildlife are limiting the livelihood options to a great extent. Sustainable use of these resources is of paramount interest not only to the sustenance of local communities but also for the conservation of rare flora and fauna, water and carbon sequestration, and preservation of cultural and natural landscapes. Such conditions depict the inexorable link between poverty and environmental degradation, each reinforcing the other. Thus, strengthening ecological coherence and resilience in this farming system through co-management operations is necessary for both conservation and sustainable use of resources. ICIMOD started a rangeland programme in 1996 with the main thrusts being to a) improve community-based rangeland management practices that balance grazing and other economic activities with biodiversity conservation on at least six sites of six regional member countries; b) improve policy frameworks for sustainable use and management of rangeland ecosystems, pastures, and livestock resources; and c) enhance the capacities of six lead partner institutions in participatory planning of rangeland, pastoral, and livestock development (Zhaoli 2004).

In the past four decades, rangeland science shifted its focus from livestock management to rangeland ecology and then to rangeland management. Livestock management is concerned with vegetation composition and grazing mechanisms and with promotion of plant succession for greater grazing opportunities. Rangeland ecology emphasises the importance of understanding rangeland ecosystem processes and environmental conservation while maintaining the goal of optimising livestock productivity on the rangelands. Nevertheless, despite the efforts and the healing of rangelands in some instances, rangeland depletion continued worldwide and, consequently, in the past decade, the focus shifted to rangeland co-management. During recent years, ICIMOD has been advocating a co-management concept to its member countries. Rangeland co-management recognises rangelands as a multiple-use resource rather than seeing it only as grazing land. Thus, all stakeholders – viz., livestock herders, nature conservationists, farm operators, NTFP collectors, and local and central governments – need to be involved in the management and use of the

goods and services that rangelands provide. At the same time, it recognises that the public and, more specifically, rangeland users are important players in decision-making about rangeland management. This concept includes people and their social systems and not just plants and animals. It is not an end point, but rather an approach concerned with social justice and equity, sustainable use of resources, and community-based and community-run initiatives. It is a process of learning by doing through which a multiplicity of different options compatible with both indigenous knowledge and scientific evidence are capable of meeting the needs of conservation and development. The co-management approach is now gaining importance in all the major rangeland areas of the HKH.

Re-assessment of shifting cultivation

Shifting cultivation is the most widely practised farming system in the sub-tropical and tropical zones of the Eastern Himalayan region. In the whole of South Asia, an estimated 10 million hectares of land are under shifting cultivation. Across Asia generally, more than 400 million people, most of them indigenous, are dependent on tropical forests and a majority of them practice shifting cultivation. This makes it the dominant land-use system across much of Northeast India, the Chittagong Hill Tracts of Bangladesh, Eastern Bhutan, Myanmar, Lao PDR, Cambodia, Northern Thailand, Vietnam, and some parts of China. Yet, in many of these places, property rights' regimes have made shifting cultivators illegal squatters on land that has been cropped by their ancestors for countless generations. There has been no concerted effort to address this dichotomy in the Eastern Himalayan region as a whole, despite individual country initiatives.

Shifting cultivation is an agricultural system mired in misunderstanding. It has been generally subjected to policies that are based on questionable perceptions of the ecological and livelihood realities of both the practice and the farmers involved. The great variety of land-use types, the cultural knowledge of the indigenous peoples, and the vast number of plant and tree species associated with shifting cultivation are too often ignored by policy-makers, governments, and analysts. Tenurial arrangements often undermine farmers' motivation for investing in longer term agricultural and forestry practices. For example, the laws and policies of many countries treat fallow areas as empty or unused land without valid ownership, despite the fact that these areas are an integral part of the shifting cultivation cycle.

Although, a wide variety of practices fall under the rubric of 'shifting cultivation', most are marked by a short 'cultivation phase' of one to two years followed by a relatively longer 'forestry phase', usually referred to as the 'fallow'. This traditional agroforestry system has long suffered from a bad reputation, largely because the fallow period was viewed as abandoned and unproductive. It was thus branded as wasteful, inefficient, and a leading cause of deforestation. State policies invariably viewed it as a primitive practice that needed to be stopped (Kerkhoff 2004).

The general opinions on shifting cultivation are 'primitive', 'bad for the environment', and 'not appropriate in the modern world'. Still, intensive and lengthy government efforts that have taken place throughout the region to do away with the practice have not been successful. A growing pool of consensus amongst scientists, policy-makers and well-wishers has recently shown that the condemnation of shifting cultivation as a whole and the perception of fallows as abandoned and unproductive land are largely undeserved – and that, far from being abandoned, fallows are often carefully managed by farmers to provide a wide range of economic products and environmental services.

Some, for example, transform their shifting cultivation fields into secondary forest gardens by planting them with economic trees that provide fruit, nuts, resins, fibre, medicinal herbs, and building materials. This forestry phase, thus, makes important contributions to household economies. Other farmers introduce soil-building trees into their fields which enhance the biological efficiency of the fallow so that soil fertility is rejuvenated, weeds suppressed, and other fallow functions achieved within a shorter time frame. This permits a shortening of the fallow phase without sending the system into a downward spiral of degradation. In turn, this intensified cultivation deflects agricultural pressure from expanding into nearby forests. Rather, forests can be excluded from the shifting cultivation cycle and preserved as community or state forests.

Regardless of whether trees are chosen for economic or biological purposes, or more likely a combination of both, all of these improved forest fallows play an important role in conserving biodiversity and deliver many of the same environmental services as primary tropical and sub-tropical forests. The fallow phase helps in species' regeneration, maintenance of biological richness of forest species, and continuing land coverage by healthy secondary tropical forests. There is, thus, a growing stream of thought that mechanisms should be devised to compensate forest-dwelling communities for the real services that they provide in managing tropical forests. Like farmers all over the world, shifting cultivators constantly try to modify their farming to address the modern needs of larger societies through an innovative process that is based on guiding principles derived from previous experiences, as well as prevailing values about what is appropriate. ICIMOD is playing a vital role in carrying out careful documentation and validation of these practices to demystify the common stereotype of shifting cultivators as farmers engaging in wanton destruction of forest ecosystems – and is portraying them more accurately as forest planters and managers. Through the combined efforts of farmers and policy-makers, a transition process is now visible (Kerkhoff and Sharma 2006).

Biodiversity-linked enterprises

Biodiversity management by the people becomes more evident when it has a utility value and communities benefit from it. The utility could be for subsistence: as, for example, NTFPs form the food security strategy for many indigenous people in the HKH region or for enterprise development that provides income generation opportunities for poor rural households. Some examples of enterprise development with community involvement through use of biodiversity can be seen in the HKH region, but they seem more like islands of success that are yet to receive scaling up efforts. There is great potential for enterprise development with NTFPs, particularly medicinal and aromatic plants; however, the forward linkages have not been properly studied. In general, problems with most of these NTFPs include unsustainable harvesting and lack of management of these resources in both government and community-managed forest and pasture areas. Only a few species are being cultivated on a small scale in private areas.

NTFPs form an important part of the economy of mountain people in the HKH region. They are the primary motivating factor for participating in forest management. These NTFPs are used as food, spices, herbal medicines, tannins, dyes, gums, resins, incense, oils, fibres, and construction materials, and around 200 species are traded in the region. NTFPs are harvested from national forests mainly by wild collection; the situation is not much better even in community-managed forests as NTFPs are open access resources. Specific plans for NTFP management in terms of sustainable harvesting have not been given enough attention in the region. NTFP development

needs more attention all along the value chain, and systematic efforts in backward, forward, and horizontal linkages are necessary (Sharma and Chettri 2003b).

Some successful examples of community involvement in enterprise development of biodiversity products are oak-silk in Garhwal (India); Jatamansi (*Nardostachys jatamansi*) in Humla (Nepal); traditional local paper from lokta (*Daphne* spp) and argeli (*Edgeworthia gardeneri*) in Nepal; and ecotourism in India (Sikkim) and Nepal (Annapurna Conservation Area). Sustainable harvesting of oak leaf for silk-making enhanced the regeneration of oak forests at the project sites in Garhwal Himalaya. Similarly, a medicinal plant enterprise with Jatamansi in Humla, organised through user groups' enhanced restoration and conservation of forests, resulted in increased income that generated interest in conservation. The user groups in Humla expanded the community forest area significantly (912 ha) and applied a sustainable harvesting system as per the operational plan (ANSAB 1999). There are sporadic examples of medicinal plant cultivation by individuals and communities on their private and community lands, *Swertia chirata* in Eastern Nepal is one example of communities developing indigenous technologies for regeneration, harvesting, and processing. These examples clearly indicate that enterprise development with established market linkages supported by local institutional mechanisms is successful.

Other examples are enterprises related to ecotourism that are linked with nature and biodiversity conservation. Two projects supported by the Biodiversity Conservation Network were (a) expansion of Chitwan National Park through community forestry and ecotourism development and (b) Sikkim Biodiversity and Ecotourism. Both projects had substantial impacts as demonstrated by the increased income of the communities and enhanced biodiversity conservation. The case of Sikkim Biodiversity and Ecotourism is given below as an example.

The Sikkim Biodiversity and Ecotourism Project was a collaborative initiative designed to conserve the biological diversity of key destinations. At the heart of the project were participatory approaches that link enterprise operation with conservation action, while merging traditional cultural practices. Working with communities, the private sector, and government, the project built upon their skills, interests, and knowledge to (a) increase community and private sector conservation, (b) increase economic returns from ecotourism services and enterprises, and (c) contribute to policies that meet ecotourism and conservation goals. Participants in community ecotourism plans, training courses, and conservation management used and developed new participatory learning tools that built upon the best practices and positive attributes of Sikkim's natural and cultural heritage. Using the same approach, the project exchanged experiences and expertise with mountain peoples and affiliated projects in Nepal and other parts of India. The achievements of the project are (a) participatory ecotourism planning and implementation in which all stakeholders in the community, business groups (both local and outside), researchers, development workers, and government were involved; (b) participatory conservation practices implemented at the project sites; (c) capacity and skill enhancement for both enterprise and conservation stakeholders increased the incomes of the locals and acted as an incentive for conservation; (d) contributions to tourism planning, policy, and legislation that promoted concepts of and action on environmentally friendly tourism; (e) the biodiversity status of the project site was recorded, baseline information generated, and the community became involved in monitoring to supplement scientific monitoring; and (f) a local NGO called Khangchendzonga Conservation Committee was established and has owned most of the activities started by the project, including the monitoring

of tourism activities, infrastructure, and biodiversity, followed by action on maintenance and improvement (Sharma et al. 2002).

Private sector partnership and CBNRM

Natural resources, such as NTFPs and especially medicinal and aromatic plants, have a great potential for increasing cash economies and markets within and between the countries of the HKH region. Research and development efforts in this sector often neglect the key business players, whereas, in light of the value chain, they are so important. Furthermore, they have often been limited to the national level, whereas the trade in medicinal and aromatic plants (both legal and illegal) is a typical bilateral or regional affair. The ICIMOD/IFAD collaboration with Dabur Nepal is an attempt to involve the corporate sector in research and development on enterprises based on medicinal and aromatic plants for poverty alleviation in the mountain areas of western Nepal (Sharma et al. 2004).

This initiative is part of the pre-implementation research for the 'Western Upland Poverty Alleviation Programme' supported by IFAD: other collaborators are Dabur-Nepal and the Development Project Service Centre in Humla and Jumla. The aim of the trials is to identify suitable medicinal and aromatic plants and their cultivation practices for rural enterprise development of leasehold forestry groups, based on agronomic, economic, and social feasibility – and to develop partnerships between government agencies and the private sector for promotion of NTFPs. One important feature is that Dabur Nepal Pvt. Ltd. is to guarantee buy-back of the produce at an agreed price. Working with the private sector, the following key issues were identified (after Sharma et al. 2004; Anil and Kerkhoff 2004).

Erratic supply and low quality – Despite the great potential, NTFP supplies in the market are erratic and of low quality due to unorganised and unsustainable collection methods. Cultivation could smoothen out supply lines, stabilise market prices, and reduce the market share of substitute products, hence increasing farmers' incomes.

Unreliable markets – The NTFP market is predominantly international, and India is the main hub for produce from Nepal. The Indian markets are speculative and controlled by cartels, and prices change over a short period of time. Companies are used to getting their raw materials at very low prices, and local collectors are not organised enough to exert significant bargaining power. Collective marketing and forest management as well as the availability of market information would strengthen the collectors' bargaining position.

Unsustainable harvesting – Figures estimate that at present almost 80% of the raw materials procured by the companies come from wild sources; and, for certain species, exploitation has brought them to the verge of extinction. High prices and urgent requests from traders sometimes cause the use of unacceptable harvesting methods, such as uprooting, which jeopardises future production. Cultivation would reduce the threat of extinction for certain species. Increased dependency on and benefit for farmers from NTFPs would encourage proper NTFP management and collection practices. Collective forest management could reduce premature collection and over-harvesting of high altitude resources.

Lack of know-how – Local farmers are interested in cultivating NTFPs, but they lack technical know-how and access to sufficient inputs. The most relevant government

organisations and non-government organisations (NGOs) do not have adequate technical capacity to facilitate the cultivation and sustainable harvesting of NTFPs. Additionally, for many NTFP species, cultivation has never been tried. With appropriate training and support, farmers will be able to cultivate NTFPs, particularly in areas with insignificant opportunity costs like leasehold or community forests.

Risk for the target group – Risks for farmers associated with NTFP cultivation have hardly been assessed. Crop failure as well as exposure to market forces and volatile prices can make farmers more vulnerable to food insecurity. Risk sharing between farmers and the company may become a possibility after trials on farmers' fields have been completed.

Policy gaps – Legislation banning the collection and trading of certain NTFPs is subject to frequent changes, and enforcement of bans is not consistent throughout the region. Bans do not serve to protect species, but rather cause illegal markets to open up, resulting in further exploitation of local producers. In general, only a small proportion of the collected NTFPs are reported and significant amounts of royalties and taxes are lost due to illegal practices. A regional policy and cooperation on trade seems a promising mechanism to address this issue.

Conservation on a landscape scale

Conventional protected area management, which has dominated conservation over the last 100-150 years, has tended to see people and nature as separate entities, often requiring the exclusion of human communities from areas of interest, prohibiting their use of natural resources, and seeing their concerns as incompatible with conservation. In recent years, it has been realised that most protected areas in the HKH region are scattered as conservation 'islands'. Many of them are transboundary in nature. Connectivity amongst these protected 'islands' and regional understanding and cooperation between two or more countries are necessary for effective transboundary biodiversity management.

All the eight countries of the HKH region are signatories to the Convention on Biological Diversity; the Conference of Parties (COP) of the convention in 2004 adopted 'Mountain Biodiversity' as a programme of work. These global conventions promote the ecosystem/landscape approach of conservation in the convention member countries. Through this international agreement, the HKH countries have committed themselves to establishing regional and transboundary collaboration, and this is a strong instrument for actual cooperation of the countries signatory to the Convention on Biological Diversity in managing the biodiversity of transboundary landscapes. Actions include strategies to promote integrated transboundary cooperation for sustainable activities in mountain ranges, through arrangements mutually agreed upon by the countries concerned. Regional and transboundary cooperation for research, adaptive management, and exchange of expertise and other resources are also to be promoted to strengthen and improve conservation and management of mountain biodiversity (Sharma and Chettri 2003b; Sharma and Acharya 2004).

An initiative in bilateral cooperation for transboundary conservation of the Mt. Everest Ecosystem between the Sagarmatha National Park in Nepal and the Qomolangma Nature Preserve in the Tibet Autonomous Region of China has grown over the past years through the facilitation of ICIMOD and The Mountain Institute. The four main transboundary issues that emerged for cooperation from the Everest experience are (a)

illegal poaching and trade in endangered species; (b) cross-border spread of forest fires; (c) cross-border spread of livestock disease; and (d) improving local livelihoods. ICIMOD is building on experiences from the Mount Everest Ecosystem and developing programmes for other transboundary landscapes. Through these experiences, it is realised that the existing parks and protected areas 'cannot exist in isolation as islands', neither within countries nor across national borders, if the speciation and evolutionary processes are to be naturally continued. Connecting protected areas by establishing conservation corridors and addressing conservation measures on a landscape level provides an opportunity for both vertical (altitudinal) and horizontal coverage of habitats, ensuring environmental goods and services in the Kangchenjunga landscape. Development and management of conservation corridors should ensure socioeconomic development of local communities. Enterprise-based biodiversity management by local communities shows great potential, as observed already in some instances in the region.

ICIMOD has identified five potential transboundary landscapes for cooperation and management in the HKH region. These landscapes are (a) the Pamir Landscape covering parts of Afghanistan, China, Pakistan, and Tajikistan; (b) the Kailash Landscape covering parts of India, Nepal, and China; (c) the Everest Landscape covering parts of the Tibet Autonomous Region of China and Nepal; (d) the Kangchenjunga Landscape covering parts of Bhutan, China, India, and Nepal; and (e) the Kawagebo-Namdapha-Hkakaborazi Landscape covering parts of China, India, and Myanmar.

In ICIMOD's Kangchenjunga transboundary initiative, an extensive consensus building process was undertaken with communities, conservation authorities, conservation experts, and organisations working in the landscape. Three national-level consultative workshops were organised in Nepal, India, and Bhutan where participation of policy-makers, government officials, academic and research institutions, NGOs, CBOs, and communities was ensured. During these consultations, six potential conservation corridors were identified for feasibility: (1) the buffer area on the Nepal side of Kangchenjunga Biosphere Reserve and Barsey Rhododendron Sanctuary of India; (2) the buffer area on the Nepal side to Singhalila National Park of India; (3) the corridor between Singhalila National Park and Senchel Wildlife Sanctuary in India; (4) the corridor between Senchel Wildlife Sanctuary and Mahananda Wildlife Sanctuary in India; (5) the corridor between Mahananda Wildlife Sanctuary and Neora Valley National Park in India; and (6) the corridor between Neora Valley National Park in India Toorsa Strict Nature Reserve that links up with Jigme Dorji National Park in Bhutan. For the first time, conservation and development issues were traced down from the community perspective and placed together in a regional forum during the regional technical workshop. This process brought about awareness of the importance of regional cooperation among the member countries for long-term conservation activities of the landscape. As an outcome, India, Nepal, and Bhutan agreed on the landscape approach to biodiversity conservation through corridor development for this landscape where the corridor planning process had been initiated by each of these countries. Research results on natural resource-use patterns, potential micro-enterprises, and policy issues of land-tenure systems from the corridors identified in the three countries are used in corridor planning. Case studies on high-value medicinal plants, such as *Cordyceps* and the policy on it in Bhutan; potential micro-enterprise options and market channels; inventory of biodiversity within the identified corridors; land-use practices and land-tenure systems and traditional practices; and customary laws and their comparison with existing statutory laws, are studied and analysed to support the initiative (Sharma and Chettri 2005).

This initiative revealed that the conservation of biodiversity in ecosystems straddling international borders not only renders services to nature, but also constitutes an opportunity to strengthen processes of socioeconomic development in the border areas of the cooperating countries. Transboundary cooperation also helps countries to meet their obligations under international agreements such as the Convention on Migratory Species and the Convention on Biological Diversity. Hence, landscape-level conservation meets the objective of protecting biodiversity in shared ecosystems and of combining the resources and expertise of regional countries to achieve common goals.

Criteria for successful CBNRM

Community-based biodiversity management in the context of the HKH region is complex – resulting from diverse culture, ecological variations, differences in climatic regimes, and difficult terrain. Future action should focus on the following thematic areas and criteria for effective CBNRM (based on Kothari et al. 2000; Mikkola 2002).

Policies and law
- Take appropriate national policy and legal measures to facilitate community-based biodiversity management.
- Integrate the ability and willingness to tackle external forces of development, commerce, and politics.
- Provide clear linkages between local actors with national and international supporters and facilitators.
- Provide full access of the community to information regarding policies and programmes affecting community-based biodiversity management initiatives.

Institutions, management, and processes
- Build on local knowledge systems and customary practices relevant to conservation.
- Incorporate strong local leadership.
- Build on local community institutional structures, traditional and/or new.
- Ensure clarity and strength of tenurial arrangements with clear demarcated rights to resources.
- Internally generate core funding.
- Orient external institutions (e.g. governments, NGOs, donors) to become facilitators and supporters of local community processes.
- Support continuous capacity building of all stakeholders.

Community and equity
- Primary stakeholders should be clearly identified for decision-making and benefit sharing purposes.
- Ensure equitable decision-making and representation.
- Ensure equitable benefit-sharing and visible benefits (which create a clear link between conservation and local well-being).

Ecological sustainability
- Use conscious regulations based on local and larger ecological constraints, and on understanding of the ecological impacts of community-based biodiversity conservation.
- Undertake constant monitoring and evaluation and develop local indicators.
- Balance rights with strong responsibilities and duties towards conservation and equity.

Conclusions

The HKH region offers an array of natural products for the evolving market based on its rich resources. There are unprecedented opportunities to convert these riches to ensure biodiversity conservation and sustainable development. Conservation does not mean non-use but wise use of biological resources which contributes to sustainable development. However, applying effective management principles and achieving the objectives will only be feasible if a way can be found to translate these broad frameworks into appropriate actions on the ground. Therefore, global conservation initiatives should work more towards population control and poverty alleviation, applying co-management practices to natural resources to make conservation effective and realistic.

Promotion of CBNRM and promoting sustainable economic development at the same time are among the greatest challenges of our time. Ways to achieve these two goals are becoming the focus of increasing attention, particularly within the conservation and development communities. Formal conservation in most countries has, for the last century or more, been treated as the domain of centralised government agencies. The predominant focus has been on the protection of natural resources from the people. More recently, there has been increasing recognition of the value that local communities can bring to the process of conserving natural resources. This paradigm shift has seen the development and application of management models that are designed to integrate conservation and sustainable use.

Most of the initiatives were participatory in nature with institutional and legal support having long-term commitments. These initiatives revealed that biodiversity management by the people becomes more effective and recognisable when it has 'utility value' and communities benefit from it. This utility value was harnessed either for subsistence livelihoods through the consumptive use of resources or for enterprise development providing income generation opportunities for poor rural households. However, these examples represent 'islands' of success of effective management of biodiversity and efforts to replicate and scale them up have yet to be taken. Thus, CBNRM should be people-centred, livelihood-focused, and biodiversity enriching and based on a long-term vision of providing equitable access, a fair share of benefits to local people, and conservation through the sustainable use principle.

People's participation in natural resource management, conservation and development based on economic incentives, and an integrated landscape approach are promising for effective CBNRM. The emerging second generation problems in participatory management should receive focus in future strategies. The second generation issues to be addressed are (a) the extent of the communities' rights to economic benefits, especially in mountain areas, (b) assigning of forest areas to communities, (c) developing systems for conflict resolution, (d) dealing with different administrative and forest boundaries, (e) increasing women's participation, (f) inclusion and full participation of traditional users and equitable distribution of benefits, and (g) promoting social equity in the light of unequal power relations between the rich and the poor, high and low castes, women and men.

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Advances in Community Forestry in Asia

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Abstract

Over the years, one thing that has become increasingly evident is that there can be no single model for community forestry. Countries in the region have different historical, political, social, and economic settings, and this has given rise to a variety of community forestry modalities. In some areas, rural communities living in or near forestland may use forest resources according to some form of indigenous management system. In other locations, local communities are being seen as legitimate partners for the effective management of forest resources that, until recently, have been managed by government forestry authorities. Approaches taken vary from country to country. For example, in Nepal, access and use rights to forests are given to forest user groups, whereas, in Vietnam, forestland is allocated to individual households*. On the other hand, in Thailand, many community forestry initiatives are happening on the ground without any national framework to legitimise these local efforts. In contrast, the legal framework for community forestry is widely recognised in the Philippines, but it has yet to be translated into a reality that benefits local communities. At present most community forestry activities are planned and implemented within the individual country context (social, economic, political, and environmental). While this is important, many of the problems facing any one country in promoting community forestry are also common to other countries. Analysis of these issues and strategies to address them will be more effective if carried out jointly at the regional level rather than at the individual country level.

The most common problems are lack of sustainable and intensive forest management, livelihoods, governance, and institutional and role of stakeholders' issues. The vison of the Regional Community Forestry Training Centre for Asia and the Pacific (RECOFTC) is for local communities in the Asia-Pacific region to become actively involved in the equitable and ecologically sustainable management of forest landscapes. The implementation of this vision must be undertaken in the context of current international evidence about community forestry and poverty linkages and based on current international commitments to reach the poor.

The linkage of forestry development with poverty is a logical one. The evidence shows that community forestry intervention has provided positive outcomes for communities in developing countries, including the poorest people. This evidence (with examples from policy, strategic, and operational levels in at least one country, Nepal) provides a basis for suggesting that there is a significant potential for community forestry to achieve positive outcomes on a global scale.

Community forestry explained

Community forestry as a term means different things to different people, depending upon their background and experiences. The Regional Community Forestry Training Centre for Asia and the Pacific (RECOFTC) currently defines it as follows.

> 'Community forestry involves the governance and management of forest resources by communities for commercial and non-commercial purposes, including subsistence, timber production, non-timber forest products, wildlife,

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* A new forestry law will come into effect from April 2005 that will enable forest management through communities.

conservation of biodiversity and environment, and social and religious significance. It also incorporates the practices, art, science, policies, institutions, and processes necessary to promote and support all aspects of community based forest management' (RECOFTC Strategic Plan, 2004: 11).

It is an evolving concept which has persisted in natural resource management programming for almost thirty years. Its persistence lies fundamentally in its value as a concept and set of approaches for conservation and development that have evolved as our understanding has grown about the complex reality of forests, farmers, foresters, and their respective sustainability and livelihood concerns.

In fact, we see community forestry as being present in two distinct aspects in most countries in Asia, looking in particular at the policy context.

- Recognition of the rights of rural communities living adjacent to forests to extract resources and manage forests for their basic livelihood needs. A complementary recognition that indigenous management institutions exist and that there is significant local knowledge about the management of trees and forests.
- Recognition of the classical role of foresters in the protection and management of the national forest estate, and that this has needed to change from foresters as being agents of enforcement and protection to their new role as advisers and extensionists.

In the more advanced protagonist countries there is a further recognition that indigenous systems are neither perfect nor static – that many are weakening due to strong external economic and political influences. There is also recognition that the role of government is changing – there are now non-government organisation (NGO) service providers in some countries for example – and that external support is more about developing good governance and sustainable institutions through capacity building than simply about providing training and extension support.

It is now clear that community forestry, in all its various guises, has much to offer, although there is also room for improvement. A recent analysis has shown that, while community forestry has been able to provide significant benefits to communities in many countries, it has not been able to scale up the localised benefits to the poorest of poor people. There is, however, great potential for community forestry to deliver poverty-related outcomes, to scale up approaches for the poorest and, therefore, wide scope for community forestry to contribute to the Millennium Development Goal of halving extreme poverty by 2015.

This paper will present the current status of community forestry and analyse some of the current issues affecting community forestry policy and forest land use in Asia.

Status of community forestry in the Asian region

In the late 1970s, it was generally perceived that widespread deforestation had led to environmental degradation, and that governments acting alone were not able to reverse the trends. Community forestry emerged at this time as an approach for redressing widespread forest loss and the consequent environmental degradation and negative impact on rural livelihoods (Gilmour et al.2004).

The first 10-15 years of efforts to implement community forestry in countries such as India, Nepal, and the Philippines were spent in developing, testing, and institutionalising approaches aimed at involving rural communities in the active protection and management of forests in an effective manner. The protection and rehabilitation of degraded forests and the establishment of new forest resources were the major policy and practical objectives. This is still the case for many countries in the Asian region where community forestry (under its various guises) has been placed on the national agenda only during the past decade. Use of the rehabilitated and regenerated community forests in India and Nepal only commenced during the past decade and in other countries in the region it is barely being considered (Gilmour et al.).

In some countries, community forestry has moved well beyond the pilot stage to become a mainstream and well-accepted form of forestry in its own right. In other countries in the region community forestry is a much more recent policy initiative, and it is still in its formative stages. Box 1 provides a summary of the status of community forestry in selected countries in Asia.

Over the years, one thing that has become increasingly evident is that there can be no single model for community forestry. Countries in the region have different historical, political, social, and economic settings, and this has given rise to a variety of community forestry modalities. In some areas, rural communities living in or near forestland may use forest resources according to some form of indigenous management system. In other locations, local communities are being seen as legitimate partners for the effective management of forest resources that until recently have been managed by government forestry authorities.

Approaches taken vary from country to country. For example, in Nepal, access and use rights to forests are given to forest users, whereas in Vietnam, forestland is allocated to individual households (however a new forestry law will come into effect from April 2005 that will enable forest management through communities). On the other hand, in Thailand, many community forestry initiatives are happening on the ground without any national framework to legitimise these local efforts. In contrast, the legal framework for community forestry is widely recognised in the Philippines, but it has yet to be translated into a reality that benefits the local communities.

Challenges and opportunities

Despite the advances gained from these emerging community forestry modalities in Asia, problems still exist.

- **India** – Despite the emergence of 84,000 joint forest management committees managing 17 million ha of forest in 27 states, management is plantation rather than natural forest centred and protection oriented. There are green felling bans in many states and restrictions on communities for harvesting NTFPs for sale. There are also disputes over customary ownership in tribal areas, particularly where grazing is a predominant land use.

- **Bhutan** – Despite having advanced production forestry management systems, the social forestry scheme lacks momentum due to perceived equity issues. The current programme is aimed at replanting bare areas and on private forestry, although the country already has 72% forest cover.

Box 1. The Status of Community Forestry with the Asian Protagonists (RECOFTC 2004)

Nepal: Community Forestry (CF) – Since 1980 about 1.1 million ha of forest have been handed over to nearly 14,000 community forest user groups (CFUGs). About 1.2 million households are involved. Forests are handed over to FUGs after application to the Forestry Department and joint completion of a management plan. Supportive policies and legislation for community forestry have been adopted. About 25% of the national forest is now managed by more than 35% of the total population. There is evidence of marked improvement in conservation of forests (both increased area and improved density) and enhanced soil and water management, although some poorer groups suffer from less access to forest products than in the past. Retraining of foresters has been carried out to fit them for new roles as community advisors and extensionists.

India: Joint Forest Management (JFM) – Over 62,000 village forest communities (approximately 75 million people and 14 million ha of forest) are participating with the Indian Forest Service across 26 states (started 1988). The share of benefits to the community varies from 25-50% – in return for peoples' inputs of labour and time. Policy and laws strengthening the role and rights of communities in forest management and use support these programmes. Extensive re-training in JFM is given to forestry officials.

Bhutan: Social Forestry – The Royal Government of Bhutan has been supporting social forestry in the nation since 1979 when His Majesty the King commanded the Department of Forestry to prepare a scheme on social forestry to involve local people in the management of trees on their own or village lands. The Nature Conservation Act, 1995, provides the legal basis for social forestry. The scheme has been implemented on a cautious pilot basis, with a small number of management plans covering mostly plantations and one natural forest site (Yakpugang, in the east).

Cambodia: Community Forestry (CF) – Community forestry projects were initiated by donors in 1992. A sub-decree for CF was approved in 2003, following a further decade of emphasis on timber concession management, while CF approaches were being explored by projects. The Forest Administration is now developing a road map for national CF implementation. Four million hectares of timber concession have been cancelled, allowing for alternative forms of management.

Vietnam: Community Forestry (CF) – Community forestry has been practised on a pilot scale and its status is recognised. Of these exploratory activities, the most promising pilots are the allocation of existing forest and forestland with long-term land-use titles (Red Book Certificates) to individual households, groups of households, and village communities on a large scale in Dak Lak and Son La provinces. The government has recently promulgated a new law supporting community forestry.

Lao PDR: Village Forestry – The government thrusts are to control logging and settle shifting cultivation through decentralisation and partnerships with villages. One hundred and eighty-seven thousand families (30% of the population) still depended on shifting cultivation in the mid 1990s, and it remains a key and complex issue in rural villages. The forest land allocation process provides an entry point for community forestry through village authorities. The 1996 Forest Law provides a legal framework for the non-timber forest product (NTFP) sub-sector to enable rural families to satisfy their 'family economic necessity', including collection of NTFPs for sale. There is evidence of substantive devolution of authority to the village level for NTFP management and use, in recognition of the basic needs of rural communities. Timber management, however, remains an elusive goal through community forestry, as early attempts through projects were curtailed.

Thailand: Community Forestry – Over 8,000 village groups are de facto managing forestland in protected areas. Furthermore, the Decentralisation Act and the revised Constitution (2000) provide authority to local authorities and village councils for community management of other natural resources.

China: Collective Forest Management – Townships, administrative villages, and village household groups under collective forest management account for three-fifths of China's total forest area of 153 million hectares; much of which is concentrated in Yunnan, Sichuan, and 10 southern provinces. There are indigenous management systems in many ethnic minority areas. Extensive reforestation and plantation establishment have taken place.

The Philippines: Community-based Forest Management – Social forestry started in the mid'970s. Community-based forest management is a national strategy for management and conservation of forest resources. There are now 4,956 social forestry project sites, covering 5.7 million ha. Tenurial changes have been issued for 4.4 million ha of this land. The beneficiaries are 2,182 people's organisations involving 496,165 households. Management of forests is transferred to these organisations after application is approved and an agreement is issued. They prepare a community resource management framework for their forest. Policies, rules, and regulations to support the practice are in place. A pending Act will institutionalise community-based forest management and strengthen the rights of communities to manage forests.

- **China** – Although 60% of forestland (150 million ha) is nominally 'owned' by local communities, in reality environmental and other concerns severely constrain their rights to manage these 'community' assets.

- **Indonesia** – The national government has transferred responsibility for managing natural resources, including forests, to local authorities. However, most forests remain under central control. Decentralising responsibility to local governments without devolving rights and management to users or user groups is likely to lead to conflicts, especially if the benefits are not shared by local communities.

- **Thailand** – Village groups are managing forestland officially classified as protected areas where use is legally prohibited. Local authorities have allowed neighbouring communities limited access and use in the absence of a national-level community forest policy framework.

- **Philippines** – Although five million ha of forestland reportedly have been handed over to communities supported by local government units, the use of and benefits from the resources remain limited.

- **Nepal** – Even in the regional success story all is not well. The recognition of forest user groups as autonomous managers of forest resources has been the basis for the establishment of over 12,000 forest user groups managing more than one million ha of forest in less than a decade, with more than 75% of the groups forming the national Federation of Community Forestry Users. Unfortunately, this progress is not mirrored in the more richly forested areas of the Terai. There are further indications that only one-fourth of all forest user groups function effectively and manage the resources actively and equitably, while in the remaining three-quarters, the poorest and most dependent members may actually be worse off.

These examples do not belittle the considerable efforts of governments and citizens in Asia to improve conditions for the management of rich resources by poor people. They should, however, remind us that there are few domains in which the battle over contested resources has been decided in favour of those with the greatest need.

Such divergent perspectives illustrate the complexities involved, cutting across a multitude of political, cultural, social, economic, and environmental premises. Analysis of these multi-faceted issues can help to increase the knowledge needed to derive appropriate alternatives and solutions. Developing and building capacities and skills to address and balance the demands from sometimes conflicting approaches are just as critical.

Implications

RECOFTC's vision is that local communities in the Asia-Pacific region will become actively involved in the equitable and ecologically sustainable management of forest landscapes. The implementation of this vision must be undertaken in the context of current international evidence about community forestry and poverty linkages and based on current international commitments to reach the poor.

The linkage of forestry development with poverty is a logical one. The evidence shows that community forestry intervention has provided positive outcomes for communities

in developing countries, including the poorest people. This evidence (with examples from policy, strategic, and operational levels in at least one country, Nepal) provides a basis for suggesting that there is significant potential for community forestry to achieve this on a global scale.

Common problems can mean common opportunities

At present, most community forestry activities are planned and implemented within the individual country context (social, economic, political, and environmental). While this is important, many of the problems facing any one country in promoting community forestry are also common to other countries. Analysis of these issues and strategies to address them will be more effective if it is carried out jointly at the regional level rather than at the individual country level. Some of the thematic issues that seem to be affecting the development of community forestry in different parts of Asia include, but are not limited to, the following (RECOFTC 2004).

(i)   **Issues of governance and institutional structures in the forestry sector and the role of community forestry and its stakeholders** – How do we strengthen the role of international initiatives? How do we link them to the livelihoods of local poor communities or even to national-level policies? What are the emerging roles for government and civil society in community forestry?

(ii)   **Analysing the impact of community forestry on livelihoods and the local environment** – How do we measure poverty and its impact? How do we scale up the impact of community forestry to reach the poorest within countries and across sectors?

(iii)   **Active management of community forests** – Do we know how to develop sustainable forest management systems for commercial and subsistence use? Should we encourage timber and NTFP commercialisation?

(iv)   **The role of local communities in the management of protected areas** – How do we manage protected areas with communities? How do we undertake an ecosystem approach to scale up community forestry across landscapes?

(v)   **Examining and supporting the livelihoods of the poorest through community forestry** – How do we develop appropriate policies and practices to support livelihood improvements at commercial and subsistence levels for the poorest?

To implement a strategy to solve key regional issues effectively requires commitment from governments (to support lessons learned with good policies); donors (for sustained partnership and long-term funding); and communities (to be willing to assist poorer community members).It also requires development of projects with long time horizons (20 years plus) and graduated measurable milestones that measure process (is the intervention likely to lead to equitable and poverty-focused outcomes?) and products (using indicators related to forest production, ecology, institutional robustness, and assets).

Validation and scaling up of community forestry

Compared to the situation two decades ago, community forestry has no doubt come a long way to become a part of mainstream forestry in some countries. However, community forestry is still too narrowly viewed and most activities to date have

remained confined to degraded forest sites, working mostly at the local community level.

Therefore, the potential that community forestry has to make a difference in the management of the forest sector as a whole and other natural resource management and rural development sectors has yet to be widely recognised. For this, there is a need to make a deliberate, systematic effort to recognise more widely the importance of community forestry both within and beyond the forest sector, so that successful approaches can be scaled up and have a regional impact on the poorest people. This workshop offers such an opportunity.

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Lessons Learned from Community Forestry in Nepal

Community forest is an important source of fuel and fodder in Nepal

Nepal's Forest Policies on Community Forestry Development: the Government Perspective

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Abstract

Forest user groups are managing more than 1.1 million hectares or 25% of the national forests. Although the greenery has been maintained and expanded in some areas, and local communities are getting various benefits, the programme still faces many challenges. These challenges include pro-poor orientation of the programme; focus on income generation activities; managing forests to produce 'in-demand' products and intensification; involvement of local government, and so on. Despite the achievements, the contribution of community forestry to poverty alleviation as targeted by the Tenth Plan or Poverty Reduction Strategy Plan and Millennium Development Goals is limited. In addition, challenges also lie in increasing the productivity of forests and strengthening good governance for equitable sharing of benefits. Therefore, the government is implementing programmes to tackle second generation reforms in three thematic areas: sustainable forest management, livelihood promotion, and good governance.

Introduction

Nepal is a small mountainous country in the central Himalayas between India and China. The kingdom borders China to the north and India on all other sides. The total area of the country is 147,181 sq. km; the total population is 23 million with a 2.2% annual growth rate as per the census of 2001; and the population density is about 157 per sq km (CBS 2002). The status of Nepal in selected social sector parameters at the end of Ninth Plan is shown in Table 1.

Table 1: Socioeconomic p arameters of Nepal		
Parameter	**Unit**	**Status**
Population below absolute poverty	%	38
Literacy rate of population above 15years	%	49.2
Primary school enrolment	%	80.4
Infant mortality rate	per '000	64.2
Families with drinking w ater facilities	%	61.9
Average life expectancy	Years	61.9
Per capita GNP	US $	240
Annual economic growth rate	%	3.6
Source: HMGN 2002		

According to the Constitution of 1990, Nepal is a sovereign country with a multiparty democracy and a constitutional monarchy. The parliament elects the prime minister, who then forms the cabinet. The cabinet is the executive body, consisting of twenty-one ministries. The parliament is the legislative body of the country. The country has an independent judicial body which has a court system of various levels throughout the country. For administrative reasons, the country is divided into five development regions and 75 districts. A Regional Director heads each region and the districts are administered by chief district officers. Each district has a district development committee (DDC), which functions as the local government. The DDC chairperson is the

main representative of the local government. There are about 4,000 municipalities and village development committees (VDC) under the districts. They are the lowest level of elected representatives.

The area covered by national forests and protected area systems, which include national parks, wildlife reserves, hunting reserves, conservation areas, and buffer zones, is about 5.83 million hectares. According to the Department of Forest Research and Survey (DFRS 1999) this is 39.6% of the total area of the country. The forest area has decreased at an annual rate of 1.7% between 1978 and 1994, whereas forests and shrublands together decreased by an annual rate of 0.5% (DFRS 1999). The macro-level data need to be updated to incorporate the expansion of greenery due to the implementation of the community forestry programme.

Institutions for forest management

The institutions directly involved in national forest management in Nepal are the Ministry of Forest and Soil Conservation and the Department of Forest. The Ministry has four technical divisions: the Foreign Aid Coordination Division, Planning and Human Resource Development Division, Monitoring and Evaluation Division, and Environment Division. Forest officials of joint secretary level head each of these divisions. The minister leads the ministry, and the permanent secretary is responsible for overall administrative matters. The ministry is responsible for the overall policy coordination, monitoring, and planning of activities related to the forestry sector. The ministry has five departments which are responsible for programme implementation. The Department of Forest is responsible for the management of national forests outside the protected areas. The Department of National Parks and Wildlife Conservation is responsible for managing the national parks and implementing the genetic conservation programme. These two departments are the public land-management agencies of the government. The other three departments, namely the Department of Soil Conservation and Watershed Management, the Department of Plant Resources, and the Department of Forest Survey and Research are more involved in service provision in the fields of watershed management, research and development related to tissue culture and non-timber forest products (NTFPs), and survey and research related to the management of forests, respectively.

The Department of Forest is the largest department of the ministry and is responsible for overseeing and implementing community and private forest and national and leasehold forestry programmes. It has three technical divisions: the National Forest Division, Community Forest Division, and Planning and Monitoring Division. Field-level forest management activities are implemented through 74 district forest offices (DFOs). Each district forest office has a number of 'ilakas', which is a field-level forest office, between the forest range post and district forest office. The assistant forest officer is the head of the ilaka forest office and a number of range posts under it. There are up to three 'ilaka' forest offices, and eight to fifteen range posts in a district forest office.

According to the Forest Act 1993, all forests outside the protected areas, except for private ones, are government owned and are called national forests. For the purpose of management, national forests are further divided into different types such as government-managed, protection, community, leasehold, and religious forests. The definition of these forests is given in Annex 1.

The Community Forest Division under the Department of Forest is responsible for policy guidance, implementation support, and monitoring of community forest programmes and projects in Nepal. A division chief of joint secretary level heads the division. The list of community forestry programmes and projects presently operational in Nepal is listed in Annex 2.

History of community forestry

As in other countries, Nepal also practised forest management exclusively implemented by the state or the government. The Department of Forest (Forest Service) was established in 1942 for the scientific management of forests under state ownership (HMGN 1976). Since then, it has been responsible for the management of these forests. Private forests in the country were nationalised after the promulgation of the Private Forest Nationalisation Act in 1956 (HMGN 1956). After the promulgation of this act, forests in the Terai (the southern plains contiguous to the northern plains of India) and hills came under the legal ownership of the government. Forest management at that time was only protection oriented. The Forest Act of 1961 (HMGN 1961) was promulgated, and it provided special rights to forest officers and also gave them authority to arrest offenders without warrant. Again, a separate Forest Protection Act was promulgated in 1967 (HMGN 1967). This act gave additional power to foresters and established a one-person special court run by the divisional forest officer. Thus, forest officers were legally very powerful.

But, because local people lived around the forests and because of their dependency on these forests, forest management in Nepal was always a concern of the local people in terms of fulfilling their subsistence needs such as fire wood, fodder, and timber. Although the forests were nationalised and forest officials were made very powerful and could arrest forest offenders, deforestation continued and forest management was practised in vain. Forest management carried out exclusively by the Department was not successful. The question was how to include local people in forest management so that they had an incentive to manage them. This was the crucial issue in the 1980s. Thus, while preparing the National Forest Plan of 1976 (HMGN 1976), the need for people's participation in forest management was envisaged as a priority.

In fact, the National Forest Plan of 1976 was the first government document to mention people's participation in forest management. The plan was highly committed to introducing people's participation in forest management. The Forest Act of 1961 was amended in 1977 to make provisions to hand over a part of government forests to local political units called 'panchayats' at that time.

Panchayat Forest Rule 1978 and Panchayat Protected Forest Rule 1978

The Forest Act of 1961 was amended in 1977 to facilitate people's participation in forest management. Accordingly, Panchayat Forest and Panchayat Protected Forest Rules were brought forward for implementation in 1978 (HMGN 1978). These rules officially initiated the implementation of the community forestry programme in Nepal. Under these rules, forest land without trees was handed over to local panchayats as 'panchayat forest', and land with trees as 'panchayat protected forests'. In order to implement this provision, HMGN implemented several community forestry projects. The first project among them was the Hill Community Forestry Project supported by the World Bank which was operational in 38 hill districts.

Once the forests were handed over to the panchayats as panchayat forests and panchayat protected forests, these political bodies had to carry out the following tasks.

(i)   Sowing seeds and planting seedlings
(ii)   Protection and maintenance of forests
(iii)   Implementation of scientific forestry management plans prepared by the forest division concerned in consultation with the panchayat
(iv)   Protection of forest products against theft and smuggling
(v)   Protection of forest against fire hazards
(vi)   Protection of forest from girdling, lopping, resin tapping, debarking, or any other kind of damage
(vii)   Prevention of removal of stones and gravel, soil, or sand from the forest area (Manandhar 1980)

The Panchayat and Panchayat Protected Forest Rules of 1978 had the following inherent problems.

(i)   Forests were not handed over to the actual users who were protecting the forests or who could protect the forests. The local people did not feel that they were the owners of the forests, because the forests were handed over to lower-level political units.
(ii)   Village leaders elected to the panchayats had no incentive to manage the forests properly, because they were elected for five years and most of the forests were too far away for them to monitor.
(iii)   Because the forests were highly degraded, there were no immediate benefits and incentives for long-term management. Similarly, since the Panchayats used to get a portion of the income from the protected forests, the villagers did not have much of a sense of ownership in managing these lands.

The concepts and terms used in the community forestry programme in Nepal are given in Annex 3.

Community forestry policy context

Master Plan for the Forestry Sector

The Master Plan for the Forestry Sector (MPFS) (HMGN 1989) was prepared between 1986 and 1988. The plan was approved in 1989. It provides a 25-year policy and planning framework for the forestry sector. The plan is still the main policy and planning document for the development of the forestry sector. The long-term objectives of the Master Plan include the following.

•   To meet the people's basic needs for forest products on a sustained basis
•   To conserve ecosystems and genetic resources
•   To protect land against degradation and other effects of ecological imbalance
•   To contribute to local and national economic growth

The MPFS has given the highest priority to the community and private forestry programme. In relation to the community forestry programme, some of the important highlights of the MPFS are as follow.

•   All the accessible hill forests of Nepal should be handed over to user groups (not to the panchayats) to the extent that they are willing and capable of managing them.
•   The priority for community forests is to supply forest products to those who depend highly on them.

- Women and the poor should be involved in the management of community forests.
- The role of forestry staff should change to that of extension service providers and advisors. The forestry staff should be provided with reorientation training so as to be able to deliver the services needed by the community forest user groups (CFUGs).

The major recommendations of the Master Plan were incorporated into the formulation of the new Forest Act (1993) and Forest Regulations (1995).

Forest Act 1993 and Forest Regulations 1995

The Ministry of Forest and Soil Conservation carried out several consultation exercises with local people, non-government organisations, international agencies, and others in formulating the new, comprehensive forestry legislation. Finally, the legislation was enacted as the Forest Act in 1993 (HMGN 1993) to replace the old forest acts of 1961 and 1967. The government approved the new Forest Regulations in 1995 (HMGN 1995). The act and the regulations have given substantial rights to local people to manage their community forests.

At present, the community forestry programme is implemented as per the provisions of this legislation. The focus is on institutionalising (CFUGs) as independent and self-governing entities, nationwide expansion of community forestry, providing use and management rights to the local community, and creating an accountability forum for community development. It has also limited the role of the district forest office to that of supporter, facilitator, monitor, and regulator of community forestry. The main features of community forestry according to the Forest Act and Regulations are as follow.

(i)   Any part of the government forests can be handed over by a district forest office (DFO) to the communities who are traditional users of the resource. Only the rights of forest management and use are transferred from the Forest Department to the users, not the ownership of land itself.
(ii)   A part of the national forests can be handed over to a CFUG irrespective of the size of forest and number of households in the group.
(iii)   Handing over of national forests as community forest takes priority over handing them over as leasehold forest.
(iv)   CFUGs have to manage the forest as per their constitution and operational plan as approved by the DFO.
(v)   CFUGs are recognised as independent and self-governing entities with perpetual succession.
(vi)   CFUGs are allowed to plant short-term cash crops such as non-timber forest products like medicinal herbs.
(vii)   CFUGs can fix prices for forestry products under their jurisdiction and sell the forest products.
(viii) CFUGs can transport forest products under their jurisdiction to anywhere in the country.
(ix)   CFUGs can accumulate their funds from grants received from the government and other local institutions, from the sale of community forestry products, and from amounts received through other sources such as fines, and so on. CFUGs can use their funds for any kind of community development work and as per their decision.
(x)   CFUGs can amend operational plans by informing the DFO.
(xi)   In cases of forest offences, CFUGs can punish their members according to their constitution and operational plan.

(xii)   If forest operations deviate from the operational plan, resulting in damage to the forests, the DFO can take back the community forests from the users. However, the DFO must give the forest back to the CFUG once the committee is reconstituted.

Forest Sector Policy 2000

In the beginning, the community forestry programme was initiated from the perspective of conservation. The same concept has been adopted by the Forest Policy of 2000. Moreover, some decision-makers saw two main differences between the MPFS policy and the new Forest Act and Regulations. First, the MPFS stated that accessible forests in the hills and mountains should be handed over as community forests, but the forest act and rules did not differentiate between the hills and mountains, and the Terai in handing over national forests as community forests. Secondly, the MPFS prescribed the use of community forests to meet the basic forestry product needs of local people, but the Act and Regulations expanded the rights of users to sell forest products, even to outsiders, as a means of generating income to carry out community development activities. The new policy withdraws some of the rights of local forest users in the Terai, with the idea that the forests would be managed better by the active involvement of the government. The Forest Policy of 2000 is described below (HMGN 2000).

(i)   The barren and isolated forestlands of the Terai, inner Terai, and the Churia hills will be made available for handing over as community forests. Community forest operational plans will be prepared and forest products will be used based on annual increment.

(ii)   As the main objective of community forests is to fulfil the basic needs of local communities for fuelwood, fodder, and small timber, when surplus timber is sold by the CFUGs, 40% of the earnings from the sale of surplus timber coming from the community forests of the Terai, Siwaliks, and Inner Terai will be collected by the government for programme implementation.

(iii)   The large patch of forests in blocks in the Terai and Inner Terai will not be handed over to local communities as community forests. They will, instead, be managed by the collaborative solidarity of local users, local political bodies (VDCs and DDCs), and the government.

(iv)   The collaborative solidarity of users and the local political bodies will get 25% of the income from the sale of surplus forest products, whereas the government will get 75% of the income.

(v)   Since the Churia forests are important for recharging the Terai underground water and for conserving soil, they will not be handed over to the users. Instead, they will be managed as protected forests for watershed conservation.

The policy has created antagonism between the Terai users and the government. Neither has the government been able to manage the forests in a better manner. Presently, the government is trying to pilot this 'collaborative forest management' in the three Terai districts with the financial support of the Dutch government. The outcome of this pilot programme has yet to be seen in the field. As per a cabinet decision, the government imposed a 40% revenue-sharing modality on the sale of timber from the community forests of the Terai and Inner Terai. However, the Supreme Court annulled this decision. The government then began to collect this revenue through promulgation of the Finance Act. The Finance Act was later revised in this fiscal year (FY 2003/04). As per the revised Finance Act, the government collects only 15% of the sales' proceeds from the sale of surplus timber of only two commercial species in the Terai.

Tenth Plan for the Forestry Sector (2002-2007)

The Tenth plan was prepared in the context of the Millennium Development Goals and is also considered to be the Poverty Reduction Strategy Paper (PRSP). The plan has targeted the reduction of poverty in Nepal from 38 to 30% by the year 2007. It has four pillars for intervention, namely, (a) broad-based high economic growth, (b) social sector development, (c) social inclusion and targeted programmes, and (d) good governance. In line with the overall objectives of the PRSP, the Forestry Sector under the Tenth Plan also has twin goals: (a) reducing deforestation, soil erosion, and degradation of biodiversity and (b) solving the problem of poverty and unemployment. They are further elaborated upon as follows.

- Sustainable management and conservation – This includes a sustainable supply of forest products and environmental conservation through management and enterprise development of forests, watersheds, plant resources, and biodiversity.
- Poverty alleviation – This includes creating employment and income opportunities for the poor, women, and disadvantaged groups through participatory approaches.

The major targets of the Tenth Plan related to community forestry are shown in Table 2.

Table 2: Community forestry targets in the Tenth Plan			
Community and Private Forest Development	**Unit**	**Target**	
		Normal Case	Low Case
CF user group formation	Number	2500	2500
Operation plan preparation and handing over	Number	3000	3000
Operational plan revision	Number	4000	4000
Forest management support to user groups	Number	2500	2500
Silviculture demonstration plot establishment and operation	Number	500	425
Forest enterprise development for poverty alleviation	Number	500	500

Major strategies in the Tenth Plan

The community forestry programme has also been considered as a vehicle for poverty alleviation. The major strategies related to the objectives of poverty alleviation and community forest management are as follow.

- Increase the livelihood opportunities for people living below the poverty line by expanding forest development activities.
- Increase the participation and access of the poor, women, and disadvantaged groups to the decision-making forums of CFUGs.

Community forestry policies in the Tenth Plan

- Formulating and implementing the integrated programme in community forestry, based on broad economic growth, social empowerment, social justice and equity, and good governance to support the poor, women, and disadvantaged groups and to increase their livelihood opportunities
- Organising poor, local households with the same interest in community forestry as sub-user groups to increase their access to and benefits from community forests
- Introducing farming of NTFPs and medicinal plants in government-managed forests and community forests
- Identifying the problems related to community forestry and resolving them through stakeholders' consultations

In relation to the last, the user group formation process will be monitored and improved to solve the problem of forest product distribution among community forest users.

Other community forestry-related policies include the following.

- Introducing biodiversity registration to maintain the rights of local people to local natural resources
- Introducing integrated agriculture and forestry conservation farming in Churia watersheds
- Introducing participatory forest management in buffer zones around the protected areas
- Providing governance training to community forest user groups
- Providing training in gender mainstreaming in forest management

Joint technical review of the community forestry programme

Different multilateral and bilateral development partners have supported the community forestry programme in Nepal since 1979. They include the World Bank, Danish International Development Agency (DANIDA), Department for International Development (DFID) of the UK, United States Agency for International Development (USAID), Australian Aid (AusAid), Swiss Agency for Development and Cooperation (SDC), German Technical Cooperation (GTZ), and recently the Dutch government and non-government organisations such as CARE and World Wildlife Fund (WWF).

The community forestry programme was initially formulated with the objective of forest protection and to fulfil the basic needs of local people for forest products. After 25 years of implementation, most of the community forests have regenerated, but many new issues related to social aspects have emerged. These issues, which need further discussion and resolution, include selling surplus products from community forests, the value addition of these products, multiple forest management and better coverage by the programme, use of community forests for income generation and poverty alleviation, and better use of funds by CFUGs.

In order to tackle these issues, the government and its development partners jointly agreed to an overall review of community forestry in order to make timely improvements in the formulation of strategies and implementation of the community forestry programme in Nepal. A Joint Technical Review Committee was formed. The committee included members from the government and development partners. The process of review began in March 2000 and was finalised in February 2001. There are 11 thematic papers addressing various issues, strategies, and recommendations. Based on the analysis of these papers, the committee came up with a number of major recommendations such as redefining community forestry for livelihood support, using the income from community forests for poverty reduction, giving access to community forests to the poor as sub-user groups, allowing CFUGs to establish enterprises in the vicinity, involving local government in community forestry, and so on (JTRC2001).

Achievements of community forestry in Nepal

During the last 25 years, about 1.1 million hectares (25%) of existing national forests have been handed over to more than 13,600 local community forest user groups. These user groups constitute about 35% of the country's total population. The achievements of community forestry can be seen in terms of better forest condition, social mobilisation, and income generation for rural development and institution building at

grass roots' level. This model of local people's participation in natural resource management has also expanded to watershed management and buffer zone management, for which conservation of watersheds and maintaining biological diversity are the prime objectives. The last Forestry Sector Coordination Committee meeting stressed the need to resolve second generation issues in three thematic areas: sustainable forest management, livelihood promotion, and good governance (Kanel 2004). The first generation issues concern the expansion of forests and improvement in the condition of forests. The experience so far gained indicates that Nepal has been able to reduce deforestation and degradation of forests wherever community forestry has been practised. The achievements made through the community forestry programme are explained below in terms of three, focused thematic areas.

Sustainable forest management

Regeneration of forests
Micro-level studies and anecdotal evidence show that as a result of the community forest programme denuded forests have regenerated and the condition of forests has improved to a great extent. A study in four eastern hill districts showed that the total number of stems per hectare has increased by 51% and basal areas of forests have increased by 29% (Branney and Yadav 1998). In the Kavre and Sindhupalchok districts of central Nepal, one study found that shrubland and grassland had been converted into productive forests, increasing the forest area from 7,677 hectares to 9,678 hectare (Jackson et al. 1998). A study in a mountain watershed at three different times (1976, 1989 and 2000) spread over 25 years showed that small patches of forest have grown and merged among themselves, and this had reduced the number of patches from 395 to 175 and increased the net forest area by 794 hectares (Gautam et al. 2003). Thus, there is an overall improvement in forest contributing to local environmental conservation and increasing greenery.

Production of forest products
The Community Forest Division carried out a study among 1,788 community forest user groups in 2004. It was extrapolated to the countrywide user groups. The study revealed that an estimated 10.9 million cubic feet of timber, 338 million kg of firewood, and 371 million kg of grasses were harvested and used by users during a year. Grasses were consumed locally; timber and firewood were consumed locally as well as sold outside the user groups (Kanel and Niraula 2004).

Livelihood promotion

Community forestry is contributing to livelihood promotion in many ways. These include fulfilling the basic needs of local communities, investing money in supporting income generation activities of the poor, and providing access to the forests for additional income or employment.

Fulfilling subsistence needs
An estimated 8 million cubic feet of timber, 336 million kg of firewood, and 371 million kg of grasses produced from community forests were used by local people for their internal consumption in one year (Kanel and Niraula 2004). The use of these products has helped to support the livelihoods of local people.

Financial support to livelihood promotion
The same study showed that CFUGs earned an estimated 416 million rupees annually from the sale of forest products outside their groups. The earnings were used for

different purposes: e.g., 12.6 million rupees for pro-poor community forestry including loans to poor families, and giving them training in forest-based income generation activities and others (Kanel and Niraula 2004).

Access to forests for income generation
As a pilot programme, some user groups like Ghorlas CFUG in Myagdi (Baniya 2004) and Jhauri in Parbat are establishing sub-user groups of the poorest of the poor who have no alternative employment or income. These sub-user groups are given access to community forests to produce NTFPs or medicinal plants and are allowed to share the income. If this mechanism were to be replicated on a large scale, there is tremendous scope for additional contributions to livelihoods from community forests.

Good governance

Establishment of robust legislation
The Forest Act 1993 (HMGN 1993) and Forest Regulations 1995 (HMGN 1995) are robust legislations that recognise community forest user groups as self-sustained independent entities recognised by the DFO. The legislation gives full authority to user groups to manage community forests as per the operational plan approved by the DFO. Twenty-five per cent of the income from CFUGs has to be spent on the protection and management of the forests. The remaining seventy-five per cent of the income can be spent on other activities such as community development. At present, all the elected bodies such as the parliament and local-level political units have been either dissolved or not elected. However, CFUGs are grass roots' organisations that have elected committees responsible for forest management and other local-level development activities. The Forest Act and Regulations provide ample freedom to undertake any development activities and a forum under which local people can exercise democracy.

Participation of local people
According to the legislation itself, local people have the rights and also the duty to manage community forests. Local people are spending their voluntary labour in various community development activities. The users spent more than 2.5 million person days in forest related activities in a year. The value of this voluntary labour contribution is about NRs 164 million rupees at an opportunity cost of NRs 65 per person per day (Kanel and Niraula 2004). Out of the total labour contributed to the community forestry programme, 42% is for community forest protection, 19% for meetings and assemblies, and 19% for forest product harvesting.

Establishment of networks
There are networks of user groups established at range post, district, and national levels. The Federation of Community Forestry Users, Nepal (FECOFUN) has the largest network of user groups at different levels, since more than 70% of CFUGs are affiliated with it. There is also another network of forest users known as NEFUG (Nepalese Federation of Forest Resource User Groups). These networks of user groups also work as pressure groups to promote good governance within the community forestry programme. The existing 13,600 user groups themselves are also a good example of networks of local communities.

Participation of women and other minority groups
Increasing participation of women, the poor, and disadvantaged groups has been very important, yet a difficult issue in community forestry. Participation of these groups has been improving and the national data base maintained by the Community Forestry

Division shows that women's participation is about 25% and that there are about 600 CFUGs operated by women only on the committees.

Local-level capacity building
About 7.7 million people (35% of the population) are involved in the 13,600 CFUGs. Similarly, a large number of elected leaders, or about 170,000 local people, are working as committee members. Some local people in the user groups and committees have received a lot of training in skills such as silviculture, gender equity, record keeping,and so on; and this training has strengthened local capacities to a great extent. As a result of these local-level democratic exercises and training, many CFUG members have been elected into different positions in the DDCs and VDCs.

Challenges and issues

As mentioned before, user groups are managing more than 1.1 million hectares or 25% of the national forests. Although the greenery has been maintained and expanded in some areas, and local communities are receiving various benefits, the programme still faces many challenges. These challenges include the pro-poor orientation of the programme; focus on income-generating activities; managing forests to produce demanded products and their intensification; and involvement of local government. Details of the challenges are described below.

Good governance

Pro-poor orientation of the programme
The government of Nepal became successful in handing over the rights and duties of community forest management to local communities, expecting that the poor would get the major benefits. However, problems are emerging because of the capture of community forestry benefits by local elites who are elected as the agents of forest users. Even now comparatively well-off members influence and capture the decision-making forum in user groups and committees. Making these institutions more accountable and responsible to poor and disadvantaged groups and women is still a very challenging job in community forestry.

Participation of local government in the community forestry programme
According to the Forest Act 1993 (HMGN 1993) and Forest Regulations 1995 (HMGN 1995), user groups are established and recognised by the DFO and they operate independently as autonomous and self-governing entities. So far, local government is not directly involved in community forest management. However, according to the Local Self Governance Act 1999 (HMGN 1999), responsibility for managing natural resources within their area of jurisdiction belongs to the local governments. Once the Act becomes fully operational, the role of the DFO will be limited. Thus, the gradual process of transferring authority to local governments is important, and, in the long run, effective involvement of local government in community forestry is also a critical issue.

Revenue sharing among the users, local political bodies, and government
Local communities use the forest products produced in the forests for their subsistence. But community forests also have surplus forest products such as timber, firewood, medicinal plants, and other NTFPs. Communities also sell these surplus forest products to outsiders at a market price. Until last year, local user groups in the Terai and inner Terai used to pay 40% of their income from the sale of surplus timber to the government. This percentage has now been reduced to 15% through the Finance Bill enacted in July 2004. So far, local governments do not receive a share of this

income. According to the Local Self Governance Act 1999, the management of natural resources within their areas is the prerogative of local governments. Therefore, additional discussion is needed to arrive at an agreeable revenue-sharing mechanism acceptable also to local governments.

Hunting and wildlife farming in community forests
Many kinds of wildlife, especially deer, are found in many community forests. Wildlife farming and using the products for meat and other souvenirs can be an attractive source of income. However, due to lack of clarity in the legislation, this potential resource is not explored and is not used.

Inclusion of distant users
Especially in the Terai, traditional users of the forest live far from the forests. However, the forest is an important source of livelihood for many distant users. New settlers coming from different parts of Nepal now surround the community forests in the Terai. Once the forests are handed over as community forests, they become the main beneficiaries. The issue of including distant users and their practical involvement in community forest management and use is a topic of debate which needs to be resolved. The government is now piloting 'collaborative forest management' in some Terai districts, but the result of this strategy has yet to come.

Sustainable forest management

Backlogs of operational plans
CFUGs are expected to prepare operational plans for their forests and manage them as per the provisions in the plan. Carrying out a forest inventory has been made mandatory for preparing an operational plan since 2000. Due to the low-level of knowledge about such inventories among the users, preparation and renewal of operational plans are taking longer than initially anticipated. Since government foresters are limited in number and community forests are expanding, support from the government foresters for preparing operational plans and inventories is difficult. Such support also creates dependency on DFO staff for preparing operational plans. This has led to a lot of backlog in revision of operational plans. Due to the delay in the renewal of operational plans, most of the activities in community forests are being adversely affected, reducing their contributions to the livelihoods of local communities.

Reluctance to apply improved silvicultural management techniques
There are very few demonstration or model community forests which show the benefits of intensive forest management to the users in a user friendly way. To some extent, local communities seem to be reluctant to apply improved techniques of forest management, thinking that the application of these techniques might destroy the forests. The concepts of active forest management and optimum production of forest products to fulfil the needs of the local community and facilitate sale of surplus products are comparatively new for community forest user groups. Both the supply and demand aspects of improved silvicultural forest management have to be accelerated to enhance benefits from community forests.

Transforming technical forestry into the local knowledge system
About 35% of the country's population is involved in the community forest user programme. The users are the real or de facto managers of the forests. But, due to the massive numbers of users involved in forest management, it is not possible to train all the people involved in community forestry through formal education at school or in universities. Thus, transferring technical knowledge of forestry to the local people is a

challenging job. Transferring knowledge through experiential learning could be the best vehicle for enhancing productivity and ensuring sustainable forest management.

Initiating Forest Certification
Many community forest user groups have medicinal and aromatic plants in their community forests. These plants and the products are even exported outside the country by private companies. Forest certification is a sustainable forest management device, the products of which could be easily marketed outside the country. The process of forest certification has been initiated as a pilot programme in some user groups. But availability of sustainable harvest data of those NTFP species and knowledge about biological diversity in community forests, which CFUGs have protected, are still scarce. Recently, the Forest Stewardship Council delegated the authority to issue forest certificates to those CFUGs that manage their own forests and supply products in a sustainable manner.

Livelihood promotion

Focusing forest management on the needs of users
Most of the operational plans prepared to manage the community forests are based on conventional knowledge of timber production. However, in the villages poor people use small amounts of timber. Their demands are focused on fuelwood to cook food; grass as animal feed or bedding material; poles as construction materials for houses, huts, and shades; and NTFPs for domestic consumption or income. These factors have yet to be incorporated widely in the sustainable management of community forests.

Focus on income-generating programmes
The total area of community forests generates about Rs 913 million per year. The users are spending 36% of these earnings in community development activities such as schools, roads, health posts, and other development activities (Kanel and Niraula 2004). Benefits from these activities to the poor are minimal, as the poor use them the least. About three per cent only is spent on pro-poor programmes. Allocation of an additional percentage of the income to improve the standards of living of poor, disadvantaged groups and women could go a long way towards resolving the second generation issues in community forestry. The Community Forestry Division is working on formulating a fund mobilisation and use guideline so that more resources can be channelled into pro-poor activities and programmes.

Supporting women, the poor, and disadvantaged groups
As the local community leaders and elite groups dominate the decisions of user groups, fulfilling the concerns and needs of the poorer sections of the community is a big issue in community forestry. Thus, within the community forest user group, supporting the poor and disadvantaged groups to improve their livelihoods is a big challenge.

Conclusions

The community forestry programme has made substantial contributions in terms of forest cover increase, income generation and rural development, and social mobilisation and institutionalisation of democracy at the grass roots' level, during the past 25 years. The programme emerged as a solution to reducing and halting deforestation and forest degradation in 1978. However, it gradually evolved into a participatory forestry programme based on institutional development. The Forest Act of 1993 and the Forest Regulations of 1995 have further elaborated the concept and practice of community forestry, and the differences between the community as an

institution and forest management as activities for both conservation and income generation. Now the CFUGs are among the most robust institutions in Nepal and are also the entry point for other rural development activities. Therefore, community forestry in Nepal is now more of an institution building process and a movement to contribute to poverty alleviation.

This paper discusses community forestry (as any social reform programme) not as a linear but as an iterative and 'muddling through' process. There is a view that community forestry has brought about a fundamental shift in the forest management paradigm. This shift in mindset is that institutional innovation or reform should precede technical innovation, because technical change cannot be brought about within an institutional vacuum. This is the reason why we consider that reforms in governance or creation of appropriate institutions to manage emerging problems and the reconfiguration of forest policy and operational rules are prerequisites for sustainable forest management and livelihood promotion. The evolution of community forestry in Nepal attests to these reforms in an incremental fashion. Other countries planning to involve people in resource management should learn that there are country-specific pathways that need to be followed rather than copying practices from a particular country. Successful innovations or reforms are slow processes, as the major stakeholders or power holders have to agree on the implications of these reforms. Every innovation or reform will have differential cost and benefit impacts on different individuals and groups. This implies considerable transaction and transformation costs. These can be reduced if the individuals and groups are involved from the inception in implementing new programmes. The success of community forestry lies in the engagement of various stakeholders from the very beginning of programme formulation. Practice has always led to policy in the case of community forestry.

So far about 1.1 million hectares (or 25% of the existing national forests) have been handed over to 13,600 local community forest user groups. These user groups constitute about 35% of the country's total population. Communities are also informally managing a significant portion of national forests, mainly in the Terai. How to involve them in this process of community forestry so that distant users also receive the benefits is a challenge.

Community forestry has brought about a significant change in the condition of handed-over forests, and, in some cases, the area of forests has also expanded. A recent study conducted by the Community Forestry Division shows that these community forests annually generate about NRs 747 ($12) million from the sale of forest products among themselves and to outsiders. If other sources of income, such as grants from the government, fines, and so on, are included, the total CFUGs of Nepal annually generate more than NRs 913 million. Annually, they spend NRs 457 million on forest development (28%), community development (36%), and CFUG operations (14%). Only 3% of the total expenditure is allocated to pro-poor programmes. The institution-building role of CFUGs is also significant, as they are the only democratically elected bodies in Nepal. At present, about 25% of the executive members of CFUGs are women. These groups have been successful in mobilising household members' involvement in local development and also act as accountability and public hearing platforms. About 2.5 million person days' equivalence of voluntary labour is mobilised annually to undertake forest and community development and to generate social capital in rural areas.

Despite these achievements, the contribution of community forestry to poverty alleviation as targeted by the Tenth Plan or PRSP and Millennium Development Goals is limited. Besides, challenges also lie in increasing the productivity of forests and strengthening good governance for equitable sharing of benefits. Therefore, the government is implementing programmes to tackle second generation reforms in three thematic areas: sustainable forest management, livelihood promotion, and good governance. These are also elaborated upon in the Proceedings of the Fourth National Workshop on Community Forestry (Kanel et al. 2004).

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Annex 1: Categories of Forest According to the Forest Act 1993

Government-managed forests – Forests managed by the government for the benefit of the country and people through production and protection of the resources.

Protected forests – Forests declared 'protected forests' and managed for their environmental, scientific, and cultural importance.

Leasehold forests – Forests handed over to forest-based industries for the production of raw materials needed by forest-based industries or handed over to people living below the poverty line to sustain their livelihoods through the production of different forest products such as firewood, timber, forage, and non-timber forest products.

Religious forests – Forests handed over to local religious institutions for development, protection, and use.

Collaborative forests – This is a recently developed concept of forest management in partnership with local people, local government, and the Department of Forest in which the inputs and responsibility for management are shared among partners. These belong to government-managed forests, and they are not mentioned in the Forest Act and Regulations; they are being piloted in some Terai districts.

Annex 2: Major Community Forestry Programmes and Projects in Nepal in 2004

Project Name	Donor	Project Period	Coverage in Districts
Nepal Australia CRM and Livelihood Project	AusAid	2002-2005	2 hill districts
Natural Resource Sector Assistance Programme	DANIDA	1998-2005	38 hill districts
Livelihood Forestry Programme	DFID	2000-2007	12 hill +3 Terai
Biodiversity Sector Programme for Siwalik and Terai	DGIS	2002-2009	8 Terai districts
Churia Forestry Development Project	GTZ	1994-2005	3 Terai districts
Nepal Swiss Community Forestry Project	SDC	2002-2005	3 hill districts
Sagun Programme under SO5	USAID	2002-2007	2 hill and 3 Terai
AusAid= The Australian Agency for International Development (AusAID) ; DFID = Department for International Development (UK) , DGIS = Directorate -General for International Cooperation (Netherlands); DANIDA = Danish International Development Agency; SDC = Swiss Agency for Development and Cooperation ; USAID = United States Agency for International Development			

Annex 3: Concepts and Terms

Village panchayat – Village panchayats were the lowest-level political bodies, consisting of nine territorial units called 'wards'. Eleven elected members – 9 ward members, one from each ward, one mayor, and one deputy-mayor known as the 'Pradhanpancha' and 'Upa Pradhanpancha' – ran a village panchayat. After the reinstatement of multiparty democracy in 1989, the Panchayat system of polity was abolished. The village development committee (VDC) has now replaced the village panchayat.

Panchayat forest (PF) – Any forest (two-thirds of which needed planting), handed over to an adjoining panchayat for management, protection, and use was called a panchayat forest.

Panchayat protected forest – Any forest that needed protection and or some enrichment planting, but which was handed over to an adjoining Panchayat for its management, protection, and use was called a panchayat protected forest.

Forest Act 1993 – The Forest Act promulgated in 1993 is the present basis for the smooth functioning of the community forestry programme in Nepal. This act also provides implementation guidelines for the operation of government-managed forest, protection forests, leasehold forests, and religious forests.

Forest Regulations 1995 – The Forest Rules were made under the forest act of 1993. These rules guide the implementation of community forestry programmes in Nepal. These rules also explain the operation of government-managed forests, protection forests, leasehold forests, and religious forests.

Community forests – Community forests are the parts of national forests that are managed and used by local users organised into community forest user groups (CFUGs), legitimised as independent and self-governing institutions by the government. They have a charter of incorporation and are responsible for the management of the national forests provided to them. While handing over the national forest as community forests, the DFO has to consider accessibility or distance from the village of the communities to the forest and the interest in and capacity of the users in managing the forest. The objective of the community forestry programme is to produce collective benefits to the local communities of forest users from the development, conservation, and use of forests.

Community forest user group – An independent and self-governing entity formed by a number of households living near a particular forest area and legally recognised by the Forest Act of 1993. The group is responsible for the management of a particular community forest handed over to them. The constitution of the user group controls its democratic functioning. The community forest user group members have the rights given by the legislation and as mentioned in the operational plan. They can use the forest products internally at a price fixed by the groups themselves and also sell the surplus forest products to outsiders at market prices. They also have a fund and the income from the sale of forest products and any other resource has to be deposited in that fund. The fund can be used for forest protection and community development activities.

Community forest user committee
A committee of a CFUG formed normally by election or selected by the user members for effective implementation of day-to-day activities of community forest user groups. It has about 11 members and they constitute the executive wing of a CFUG. The

committee has no rights laid down by the Forest Act and Regulations; however, it exercises rights as authorised by the user groups and as mentioned in the operational plan. It has been reported that most of the executive members of the CFUGs are from the elite or wealthy classes, and they do not necessarily represent the interests of the poor, women, and socially disadvantaged members of the group.

Operational plan

A legal document prepared by user groups for the management of a particular forest area under their jurisdiction and approved by the DFO. The plan guides the management of a particular community forest normally for five to ten years.

Process of handing over community forests to user groups

The following major steps are carried out in the process of handing over community forests to CFUGs.

A letter of interest is given to the DFO – The local community members living around the forest have to apply to the DFO, expressing their interest in managing the particular forest around them.

Investigation for handing over – Once the DFO receives the letter of interest, he sends a ranger (forest technician) to help the community identify the traditional users of the forests so that they are not excluded from the user group. The ranger also helps the users prepare the constitution of the user group.

User group formation – Once all the traditional users are identified, a constitution to form a CFUG is prepared. Next the users in a group have to give an application to the DFO according to the format mentioned in the Forest Regulations of 1995. With the information about the user group, the constitution will have (i) objectives of forest management; (ii) rights, duties, and responsibilities of the user group; (iii) forest protection measures; (iv) fund utilisation measures, and so on. Once the user group is formed and its constitution is registered, it is legitimised by the DFO. A certificate of registration is given to users as proof of user group formation.

Operational plan preparation – As per the needs of the users, and depending upon the productivity of the forest, the users prepare a simple management plan for the forest; the local ranger helps them. Operational plan preparation is a very important process for the users, because they will have to follow it in managing the forest and extracting forest products. Estimation of annual yield is mandatory in preparing an operational plan. An operational plan will contain information such as the objectives of forest management, a rough map of the forest, division of the forest into compartments, and silvicultural prescriptions to be followed in managing the forest. After preparing an operational plan, users have to apply to the DFO for approval.

Handing over of the forest – If the DFO finds that the operational plan confirms to the rules and procedures, then s/he approves it and a certificate for handing over the community forest is given to the user group in the format mentioned in the Forest Regulations of 1995. Then, the users have to manage the forest and use the forest products according to the approved operational plan. If the operational plan has to be amended, the user group can do this by informing the DFO (according to the Forest Regulations of 1995). If the operational plan is not followed, the government may take the community forest back, but it has to be handed over to a reconstituted CFUG. In other words, once a forest is handed over to a community, the government cannot take it as a government-managed forest. Instead, it has to remain a community forest.

Forests, Community-based Governance and Livelihoods: Insights from the Nepal Swiss Community Forestry Project

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Abstract

Community forest user groups (CFUGs) in three mid-hill districts of Nepal (Dolakha, Ramechhap and Okhaldhunga) have been able to practise good forest governance and manage thousands of hectares of community forests, as well as to contribute to improving the condition of the forests and people's livelihoods. There is an increase in forest products available in terms of the trend of sustainable off-take of timber, fuelwood, and fodder. It is shown that, despite the difficult conflict situation prevailing in the country, CFUGs are practising inclusive democracy, in which there is increased participation and representation of women and disadvantaged groups in leadership positions. These groups are directly contributing to increased access to education for socially-deprived populations through user group funds, self-employment and income-generating opportunities through forest products as ways of earning additional income, receiving greater opportunities for capacity building, and gaining access to group funds in times of crisis and natural disaster. CFUGs have not only contributed to forestry-related matters, but have also contributed to at least 16 areas of services lying within the domains of 17 government ministries.

While trends in governance, forest condition, and contribution of community forestry to livelihoods are positive, contemporary community forestry faces two major challenges. First, the intention and actions of the government, Maoist insurgents, and local government towards the autonomy of CFUGs, especially towards financial autonomy, are not clear. Second, the positive economic impact of community forestry is not as visible as expected in uplifting poor women and Dalit households. To address such challenges, multi-dimensional projects with major components of governance, forest resource management, pro-poor livelihoods, and enterprise-related interventions are necessary. Community forestry is a source of inspiration and a vehicle for change in the villages. These groups should be supported for a few more years to make them fully sustainable and self-reliant. This is possible if the project works through a conflict-sensitive management approach.

Introduction

Despite difficulties, community forestry is advancing. Community forest user groups (CFUGs) are emerging as local umbrella institutions with relatively better governance and the capability of restoring forest land, its condition, and a sustainable supply of forest products equitably and delivering goods and services covering at least 16 disciplines. However CFUGs at the moment face two major challenges: full financial autonomy from big political actors and reaching out to the poorest (also see Pokharel and Paudel 2004). The key strategies, processes, and factors responsible for change are multi-dimensional and complex in nature. Establishment of good forest governance is the foundation for change that can only ensure the sustainable management of forest resources, which ultimately leads to forestry's contribution to equity and livelihoods of the poor.

Nepal-Swiss Community Forestry Project: a brief introduction

The Nepal-Swiss Community Forestry Project has been in operation since 1990. The Project is being implemented in three districts of the Middle Hills, namely Dolakha, Ramechhap, and Okhaldhunga. These districts have an estimated forest area of 238,422 hectares, of which 33% (77,277 ha) has been handed over to the local communities as community forests. By June 2004, a total of 93,113 household members (76% of the districts' population) had been organised into 812 CFUGs. The role of the project is to give financial and technical support to the facilitation of a process through which government, non-government, and forest user groups can work jointly to promote community forestry to render it economically, ecologically, and institutionally sustainable.

Community forestry is advancing

The major achievements of community forestry in the project area can be summarised under three broad headings; namely, forest governance, sustainable forest management, and livelihoods.

Forest governance

Increasing interest of communities in taking over community forests
Even given the difficult sociopolitical situation, communities are very interested in taking over the national forests as community forests. The number of CFUGs increased from 162 in 1995 to 812 in 2004 in the three districts. As a result, the area of forest under community control has increased six fold in nine years. The area increased from 13,300 ha in 1995 to 77,100 ha in June 2004. After deduction of a 25% estimated overlap of members in the total district population of 108,000 households, the coverage of household membership in the CFUGs increased from 18% in 1995 to 76% in 2004.

Increasing representation of women, dalit, and ethnic groups in CFUG committees
The percentage of women on CFUG committees increased from 21% in 1995 to 35% in 2004 in the project area. It is encouraging to report that the number of women in chairpersons' positions also increased from 15 in 1995 to 35 in 2004. Similarly Dalit representation on CFUG committees increased from 3% in 1995 to 11% in 2004. This leadership figure is proportionately the same as the percentage of the Dalit population who are CFUG members. Likewise, representation of ethnic minorities on FUG committees increased to 42% in 2004. It is encouraging to note that in all project districts, there is an increasing trend for chair and vice-chairpersons to be from the Dalit community: for example, in nine years the number of chairpersons from this community increased from 7 to 11 and vice-chairpersons from 11 to 24.

Significant increase in trained human resources in the village
Many young men and women have become local facilitators, called social workers, and have been able to provide services to CFUGs in conflict situations. For example, there are 190 social workers, who are also members of CFUGs, of which 93 (49%) are women. Emergence of CFUGs as community-based organisation service providers is another achievement in the project districts. Out of forty-four service providers involved in implementing community forestry programmes in 2004, five service providers (11% of the total) are CFUGs that have delivered services to other CFUGs. This demonstrates that farmer to farmer extension has been possible.

Increased NGO involvement in community forestry
In eight years, between 1996 and 2004, more than 70 non-government organisations (NGOs) have been involved in community forestry in three districts. Local facilitators, as well as intermediate science forestry certificate holders, are the main human resources in the NGOs. In addition to divisional forest office (DFO) staff employed by the government, there are 219 trained personnel working in the project area, of which 39 (18% of the total employed by NGOs) are consultant rangers and the remaining 82% are trained local facilitators who are CFUG members. It is important to note that, of the total employment generation through NGOs, more than 85% of the employees are from project districts. The number of women working in both social mobilisation (as social workers) and technical staff (as women consultant rangers) is significant. There are 97 women professionals, 44% of the 219 employees of the NGOs working in community forestry. More interestingly, there are four women consultant rangers (10% of the total rangers) working with NGOs, offering services to implement micro projects; and this is much higher than the percentage of women rangers working for the government (less than 5%). Table 1 gives a summary of the achievements from 1990 to 2004.

Table 1: Summary of achievements in the three project districts			
	1990	**1995**	**2004**
Number of CFUGs	0	162	812
Number of Village Development Committee (VDCs)	166	NA	162
Number of households	0	19,585	87,116
Community forest area (ha)	0	13,343	77,133
Trained local facilitators	0	10	180
NGOs in Community forestry	0	0	39
Local NGO forester employee s	0	0	49
Women on committees	0	21.5%	34.8%
Women chairpersons	0	15	35
Women vice-chairpersons	NA	NA	233
Number of women only committees	NA	14	17
Dalits on committees	0	3%	10.6%
Dalit chairpersons	0	7	11
Dalit vice-chairpersons	0	11	24
NA = not available Source: NSCFP (2004)			

Sustainable forest management

Increased availability of forest products
It was found that CFUGs in all three project districts have been able to protect, manage, and use the forest resources sustainably. For example, data from Dolakha district indicate that the CFUGs harvest timber, fuelwood, and fodder generating about NRs. 20.8 million per annum per district, which is more than six times the district development budget in the forestry sector. Sources include 65,666 cft timber worth NRs 3.9 million @ Rs 40 per cft; 343,140 headloads of fuelwood worth NRs 8.5 million @ Rs 25 per headload; and 565,100 headloads fodder worth NRs 8.4 million @ Rs 15 per headload.

In addition, CFUGs together with private tree owners and district forest officers have been able to provide raw materials to the forest-based enterprises that have been established in recent years. This has been possible because of improved forests and landscapes in the project districts. There are nearly 50 forest-based enterprises running in the three districts. Of these 41% are timber-based, 28% are Nepali paper-making enterprises, and the remainder are for essential oils, bamboo products, and handicrafts (Table 2).

Table 2: Forest -based enterprises in project districts		
Type of enterprise	Number of enterprises	Percentage
Timber-based	19	41
Paper-making	13	28
Commercial nursery	6	13
Essential oils	4	9
Bamboo-based	3	7
Handicraft based	1	2
Total	46	100
Source: NSCFP (2004)		

Equity and livelihoods

Locally-initiated provisions related to social equity
Evidence indicates that communities themselves have introduced innovative solutions to address the issues of equity and livelihoods of the poorest members of the CFUGs. An analysis of the pro-poor provisions of 812 CFUGs in the three districts indicates that 442 CFUGs (54%) have put clear provisions and practical actions into operation to address issues of equity and livelihoods. Out of the total number of CFUGs with pro-poor provision, a sample of 134 CFUGs indicates that CFUGs have crafted a sophisticated system of equity provisions into their operational plans. The nine main areas include: provisions for forest products, education, loans and grants, humanitarian assistance, enterprises and business, training and skill development, land allocation, employment, and positive discrimination for leadership positions on the CFUG committees. For example, of the 134 CFUGs sampled, 128 were found to have various types of locally-initiated equity provisions for forest products for the poor. Out of the 128, for example, 37% had provided forest products (including timber) at subsidised rates and 32% had distributed forest products (other than timber) free of cost. Similarly, 66 CFUGs had offered educational support to children from poor households; 62 had provided funds to poor households; and so on (Table 3).

CFUG contributions to local development and livelihoods
A desk study was carried out to assess the type and scale of work carried out by CFUGs on various livelihood needs of the communities. A total of 65 newspaper articles, covering 31 districts, written by journalists during the period from 2002-2004 were reviewed. From the review it was found that CFUGs are acting like small nations and an umbrella of local governance at community level, delivering services related to almost 16 line ministries. Box 2 gives examples of the forms of activities that CFUGs have undertaken. These include: institutionalisation of democratic practices, CFUGs working as village banks and financial institutions, marketing and supply of forest products, judiciary, cooperatives and collectives, security and internal affairs, environmental management, agriculture and livestock development, drinking water and community infrastructure, gender empowerment and social equity, education, transport, communication and information, tourism, health services, and forestry development.

Table 3: Equity provisions in FUGs' decisions and operational p ans				
Type of provision	**Operational p lans with provi sions for the p oor**			
	Dolakha	**Ramechhap**	**Okhaldhunga**	**Total**
No. of FUGs in sample	**32**	**72**	**30**	**134**
Equitable, distribution of forest products				**128**
Forest products at subsidised rates	22	5	21	48
Forest products other than timber given free of cost [*]	10	22	9	41
Timber given free of cost	0	13	0	13
Greater quantities of forest products	0	0	13	13
Additional fuelwood provided to the blacksmith fo r making charcoal	0	0	11	11
Additional fuelwood and fodder given as compensation for construction timber given to the well -off	0	1	0	2
Positive discrimination in favour of dalits and women for leadership positions on the committee	20	40	15	**75**
Support to education				**66**
Scholarships for dalits and poor children	30	28	8	66
Employment to the poor				**5**
Opportunities for the disabled and dalits to work as social workers	2	0	0	2
Employment opportunities as forest watchers	0	1	2	3
Land allocation to the poor				**19**
Allocation of forest land to the poor	6	8	5	19
Training opportunities for the poor				**7**
Selection to participate in training courses, workshops, and meetings	0	0	1	1
Skill development training for the poor	0	6	0	6
Funds for the poor				**62**
Grants in cash	1	3	1	5
Loans without interest	22	7	11	40
Loans with low interest	0	3	0	3
Fund mobilisation for poor households (HHs) by the committee		14		14
Access to business and enterprise opportunities				**19**
Support for livestock	0	18	0	18
Support to establish forest -based enterprises	0	1	0	1
Welfare and humanitarian support				**24**
Humanitarian grants in cash	10	0	3	13
Exemption from membership fees		2	8	10
Transportation support for delivery of forest products to poor HHs	0	1	0	1
* Extrapolated on the basis of a study carried out in 72 CFUGs on the implementation status of pro poor provisions in operational plans.				

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Challenges

Despite the achievements and contributions that CFUGs have made in relation to social equity and livelihoods through community forestry, among many others, there are two major challenges. The first is external and related to the autonomy of CFUGs, and the second is internal and related to poverty.

The external challenge relates to the intentions and actions of big political actors such as the government, particularly the Ministries of Finance and of Forest; Maoist insurgents; and local government towards the financial autonomy of CFUGs, and CFUGs' relationships with these 'big' actors. Although there are policies, a legislative

framework, and verbal assurances that very much support a community-based resource management regime, perceptions and decisions made with regard to benefit-sharing arrangements and taxation remain ambiguous, threatening the autonomy of CFUGs' decision-making rights.

The internal challenge is related to the equity sensitivity and poverty orientation of local power elites who are CFUG leaders. Equity provisions for the benefit of the poor mentioned are outcomes of many factors. The most significant factors are local champions and charismatic young leaders who are exceptional in their thinking – different from the fatalistic thinking that Nepali society has suffered for too long. Finding good leaders in villages is a real challenge.

Lessons learned: factors responsible for positive change in community forestry

There are a number of factors responsible for the success of community forestry and its contribution to forest restoration, social equity, and livelihoods.

- **Policy-making process** – The current forest policy of Nepal was developed through a long process of 'learning by mistakes'. Enactment of the Forest Nationalisation Act in 1957 was an attempt that proved to be a test of the impact of the 'state control' approach to forests, and it led to a loss of large areas of forest in Nepal. This resulted in the emergence of the notion of a decentralised approach to forest management which took place in 1978 and promoted the establishment of panchayat and panchayat protected forests. It took almost 10 years to learn and realise that forest management by local bodies was not effective. Further decentralisation was required to community-level user groups for better participation and effective forest governance. The latter concept was endorsed in 1987 in the Master Plan for the Forestry Sector. Piloting on the process of forest handover was allowed until the Forest Act was rewritten in 1993. An additional two years was taken to draft the Forest Regulations and Community Forestry Operational Guidelines which were officially formalised in 1995. Altogether it took almost 17 years to formulate the appropriate policy and legislative framework currently in practice. The most important lesson learned from this process was that to have good legislation in place, innovation and piloting should be allowed first, this should be followed by policy formulation and enacting legislation, following adequate experience and lessons obtained from piloting.
- An **enabling policy framework** should trust the strengths of local communities and grant them autonomy.
- **Multi-stakeholder participation** and interactions on policy and practice at various levels should be encouraged and institutionalised. Forums such as the Forestry Sector Coordination Committee at the central level and the District Forest Coordination Committees in the districts are examples.
- The **role of champions and change agents** in the community, in organisations, and at policy level are the key to positive change.
- A **shift from subsistence livelihoods** to an enterprise and business-oriented approach should be promoted to generate more wealth from community forests.
- The **process and the steps responsible for positive change** are community forestry's emphasis on institution building and good and inclusive forest governance (first step), capacity building of forest users for effective forest resource management using forest management as a means not an end (second step), mobilising group funds and forests for social equity and improved livelihoods

(third step), and contributing to poverty eradication through forest-based enterprises and businesses (fourth step).

- The **main strategy** that worked well in terms of addressing **gender and equity** issues was not to consider CFUGs as homogeneous entities. Inequalities exist within CFUGs in terms of wealth, gender, caste, and remoteness. Extra efforts are required from development agencies and power elites along with methodological innovations to ensure pro-poor sensitivity. In addition, a separate structure and budget should be allocated for a social equity component that exclusively targets the poorest members of CFUGs.
- Learn how to **govern democratically** from the CFUGs.
- Further **enable and empower the CFUGs** working 'in and on conflict' through a conflict sensitive project management approach (see NSCFP 2005) and learn how to work in and on conflict.

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Community Forestry in Nepal: Achievements, Opportunities, and Challenges: A Case Study of Gadibaraha Community Forest in Dang

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Abstract
Although community forestry has made commendable achievements and provided unprecedented opportunities to rural communities, attempts to address the issues of empowering women and marginalised groups and to alleviate poverty achieved only limited success. Currently, the insurgency situation prevailing in many areas is hindering the smooth implementation of the programme and affecting the functioning of many community forest user groups (CFUGs), including that of the Gadibaraha CFUG. Both the security personnel and the insurgents are vying for control of the forests because of the income that they bring or for security reasons. The local people are afraid to enter the community forest, primarily due to threats from the conflicting parties. Although the policy and legal environment in Nepal is very favourable towards community forestry, its implementation is seriously jeopardised due to the lack of recognition and respect for the CFUGs as legal entities by the responsible sectors and actors in the field.

Introduction

The age-old, isolated and deserted hills have a new scenic view covered with green forest. There is a considerable and remarkable improvement in the forestry arena. With the concept of community forests in mind, millions of people have been mobilised into conservation and promotional activities for the improvement of deteriorated forests. Among the development activities implemented in Nepal, the Community Forestry Development Programme is regarded as one of the most successful and participatory programmes.

Nepal is the land of Mount Everest and the birthplace of Lord Buddha, a man of profound peace and solace. Moreover, the country is equally famous at global level as the 'country of community forests'. Candidly speaking, the success of community forestry has given rise to improvement in the condition of forests; a substantial amount of the income generated from community forests is used within and outside the community; and supports poverty alleviation measures and strengthening of democratic norms at local level. In this process, about 14,000 community forest user groups (CFUGs) are involved in the sustainable management of about 1.1 million hectares of forest in Nepal (CFD 2005).

Through time-bound experience, study, and analysis of the achievements made and challenges foreseen, one can surmise that with strategic development towards good governance, sustainable livelihoods, and sustainable forest development, noteworthy improvements in community forestry development will be achieved (Kanel 2004). It is important to note that the community forestry programme with its twenty-five years of experience is currently engaged in the process of meeting the Millennium Development Goals on poverty reduction and ecological improvement.

The Federation of Community Forestry Users, Nepal (FECOFUN) is the representative as well as the national organisation of all community forestry user groups in the country. More than 9,000 CFUGs, representing 64% of the total CFUGs, are affiliated with FECOFUN. Since its establishment in 1995, FECOFUN has concentrated on advocacy to safeguard users' rights over forest resources in a peaceful manner. Basically, FECOFUN is launching various programmes in coordination with local government, political parties, community forestry projects, non-government organisations, civil societies, and government for policy advocacy.

Despite such successful scenarios in community forestry, there are also emerging challenges and constraints. Among these challenges, some are related to nation-level policy issues and others concerned with the micro-level. The prime objective of this case study was to explore the major achievements and challenges of community forestry in Nepal. At the same time, the study aimed to identify the field reality of community forests in reference to the implementation of community forestry policy.

Policy framework of community forestry in Nepal

The community forestry programme in Nepal is based on various policies such as the Constitution of the Kingdom of Nepal 1990, Master Plan for the Forestry Sector 1989, Forest Act 1993, and Forest Regulations 1995. The policy and legal frameworks for community forestry are outlined in the following passages.

The Constitution of the Kingdom of Nepal, 1990

The Constitution of the Kingdom of Nepal 1990 follows the principles of decentralisation. In the process of policy-making, rights from the centre are to be delegated to local-level authorities to ensure their active participation.

Article 26, clauses (3) and (4) of the Constitution of the Kingdom of Nepal are related to natural resources. Article 26 (3) mentions that the State shall pursue a policy of mobilising natural resources and the heritage of the country in a manner that might be useful and beneficial to the interests of the nation.

Similarly, Article 26 (4) states that the State shall give priority to the protection of the environment and also to the prevention of its further damage due to physical development activities by increasing the awareness of the general public about environmental cleanliness; and that the State shall also make arrangements for the protection of rare species of wildlife, forests, and vegetation.

Likewise, Article 26 (10) says the State shall pursue a policy that will help promote the interests of the economically and socially backward groups and communities by making special provisions for their education, health, and employment.

Master Plan for the Forestry Sector of Nepal

The Master Plan for the Forestry Sector (MPFS), implemented since 1989, is the main policy document for the forestry sector. It recognises the rights of the local community and the aspirations of the people at policy level. The mandate of the MPFS is to promote local and national economies through the sustainable management of forests by the involvement of local communities. Out of the six main programmes, community forestry is given first priority by the MPFS (HMGN1989).

Forest Act 1993 and Forest Regulations 1995

After the restoration of democracy in Nepal in 1990, the government formulated the Forest Act of 1993 and Forest Regulations of 1995 to implement the Master Plan for the Forestry Sector. The Act and the Regulations have both given strong legal grounds for implementing community forestry, and thereafter it gained momentum in terms of handing over to local users, forest management, and fulfilment of the needs of user groups for forest products.

As mentioned in the Forest Act, a community forest is part of the national forest which is handed over to the CFUG for management, conservation, and use of forest resources. The district forest officer (DFO) is authorised to hand over a portion of the national forest as community forest to user groups and issue certificates accordingly. Moreover, the DFO, in mobilising the CFUG, may render technical and other necessary support to facilitate the establishment of user groups and to help them prepare operational plans. The CFUGs are registered at the district forest office (DFO) in accordance with the law. The CFUG is considered to be an autonomous, corporate body which has its own official stamp, determines the prices of forest products, and uses the funds realised.

The Forest Act of 1993 recognises community forestry as the priority programme over other forestry sector programmes. However, it also states that the forest is to be used without affecting environmental and community interests.

Case Study: Gadibaraha community forest

Methodology

The case study described here was carried out in Gadibaraha Community Forest of Dang district (mid-western part of Nepal) in order to analyse the achievements and challenges of community forestry at micro-level. At first, relevant secondary information and literature were reviewed. Most of the data and information were collected from official records such as the minute book, accounts, constitution, operational plan, annual programme, and report of this CFUG. Field observations were carried out with CFUG members. This report has been prepared, based on group discussions, meetings, and interviews with members of CFUGs. An attempt has been made to reflect the achievements and challenges visualised in the process of community forestry management in Nepal.

Location

Dang Valley is located in the Mid-West Region of Nepal and lies between two hill ranges: the Mahabharat hills (mid-hills) to the north and the Siwalik hills to the south. Gadibaraha community forest is located in Tulsipur municipality of Ward No.2, Dang District. Gadibaraha is known as Thulo Damar (a large plain). For the last 30-35 years, the area has been covered with dense forest which is the habitat of valuable flora and fauna.

Until 1975, Gadibaraha area was covered with intact virgin forest. There were only 15-16 houses inhabited by Chettri, Newar, and Biswakarma families. Subsistence agriculture with animal husbandry was the source of their livelihoods.

In the 1970s, people from majority caste groups, such as Brahmans and Chhetris, migrated to Gadibaraha from Rukum – a remote hill district. Due to increasing

population pressure and political pressure, the forest was gradually converted into agricultural land and pasture. After 1987, in order to retain the panchayat (partyless political system), local people with political backing started to clear the forest haphazardly for agriculture and, consequently, most of the forests of Gadibaraha were turned into degraded forest and barren area during 1988/1989.

At present, Ward No.2 covers the hamlets of Majuwa, Naya Basti, Sunoulipur, Rachhya chour and the Dang Eye Hospital. During 1990, the local villagers became aware of the negative impact of deforestation, and they appointed a forest watcher and paid him with their own in-kind contribution. In 1993, with the introduction of the Forest Act, people started the process of community forestry in the name of the god Baraha: the name of the user group is Baraha Community Forest User Group. The group prepared a constitution and operation plan and registered officially in the District Forest Office on March 15, 1996. The group covers 496 households and 216 hectares of forest area. The total population of the group is 2,144; 1,094 women and 1,050 men in 496 households. The caste combination is mixed and consists of Brahmans (418), Chhetris (630), indigenous groups (617,) and disadvantaged groups (479).

Programmes

Well-being ranking
Targeted programmes were carried out on well-being ranking of members of the CFUG, using participatory rural appraisal. The assessment criteria were classified into four components: very poor, poor, middle class, and rich. Among 496 households, 96 households were identified as very poor, 116 as poor, 111 as middle class, and 103 as rich.

Table 1: Indicators of well-being			
Very Poor	**Poor**	**Middle Class**	**Rich**
▪ Land squatters (people having no house) ▪ Livelihood based on selling forest products ▪ Livelihood based on stone crushing	▪ Hand to mouth existence only, for three to six months ▪ People having less than 0.30 hectares of land ▪ Working as artisans and labourers ▪ Working on another's land as a labourer	▪ Possessing 0.33 to 0.66 hectares of agricultural land ▪ Temporary service holders ▪ Engaging in cattle farming and agriculture ▪ Retailers	▪ Produce surplus food grains from own land ▪ Have good houses ▪ Permanent service holders ▪ Possessing private vehicles ▪ Having more than 0.66 hectares of agricultural land ▪ Good income source from business/ trade
Source: Gadibaraha CFUG Reports (2000 -2004), Dang			

The well-being ranking was carried out on the basis of the indicators shown in Table 1. The well-being ranking provided the basis for launching a focused programme for the poor, women, and disadvantaged groups.

Income-generation programme for poverty reduction
Forest protection, management, and community development are common programmes. Recently, a fund was allocated to improve the social and economic conditions of 14 poor households living below the poverty line. Eight households received funds of NRs 2000 each for goat farming, four households NRs 6600 for beekeeping, and two households NRs 2000 for pig farming. Additional funds have also been provided by SAMARPAN (Strengthening the Role of Civil Society and Women in

Democracy and Governance) – a project of CARE Nepal, the Small-scale Economy against Poverty Programme, and the Livelihoods and Forestry Programme. The income-generating programme has been implemented successfully and has raised the income level of these poor households in the CFUG.

Capacity building
In addition to forestry development, the CFUG is playing an important role in enhancing the capacities of community members, especially those of marginalised people in the group. The CFUG held different training sessions, including seminars, workshops, and meetings, from 2000 onwards. The capacity-building programmes were carried out by the CFUG itself and in collaboration with various supporting agencies. The participation of people from marginalised groups and women is encouraged. Out of the total 47 persons who participated in capacity building training over a four-year period, Dalits (disadvantaged groups) made up 4.2%, indigenous groups 14.9%, and women 29.8% (Table 2). The participation of various caste groups in terms of type of training is shown in Table 3.

Table 2: Year-wise people's participation in capacity -building programmes

Year	Participants									
	Brahman		Chhetri		Indigenous		Dalit		Total	
	F	M	F	M	F	M	F	M	F	M
2000	0	5	1	0	0	3	0	0	1	8
2001	0	3	1	2	1	1	1	0	3	6
2002	3	5	3	9	0	2	1	0	7	16
2003	2	1	1	2	0	0	0	0	3	3
Total	5	14	6	13	1	6	2	0	14	33
Source: Gadibaraha CFUG Reports (2000 -2004)										

Table 3: Programme-wise participation in capacity -building events

Training/ Seminar	Supported by	Participants									
		Brahman		Chhetri		Indigen-ous		Dalit		Total	
		F	M	F	M	F	M	F	M	F	M
Seminar on constitution & operational plan	User Groups	0	3	1	5	1	2	1	0	3	10
Advocacy training	User Groups	2	2	1	4	0	2	1	0	4	8
Forest management training	District Forest Office	4	4	3	13	7	0	4	2	18	19
Advocacy literacy	SAMARPAN FECOFUN	11	0	8	0	4	0	2	0	25	0
Community literacy class	Community Dev. Centre	9	0	4	0	2	0	7	0	22	0
Good governance	SAMARPAN	11	0	4	0	1	0	10	0	26	0
Leaf-plate preparation	User Groups	11	0	4	0	1	0	10	0	26	0
Source: Gadibaraha CFUG Reports (2000 -2004)											

Achievements

Sustainable forest management – The user group strictly enforces the rules and guidelines on forest harvesting, collection of grass, and other forest products. Domestic animals are not allowed to graze in the community forest, thus the users practice stall-feeding. In 2001, a nursery was established to grow the seedlings required and an afforestation campaign was launched with the assistance of CARE Nepal, the District Watershed Conservation

Office, District Forest Office, and other agencies. In 2003, 27 plots were established for fruit farming on three hectares of land. A demonstration plot was also established.

Nursery management – Over the last five years, this CFUG has been producing various types of plants in its own nursery. To date, this CFUG has produced one hundred thousand plants and distributed these plants to other CFUGs and to the private as well as the public sector for the afforestation programme.

Community development – With the financial and technical assistance of various organisations and contributions of volunteers, this CFUG has completed many community development programmes such as construction of a CFUG office building, community building, school building, and maintenance of roads and culverts.

Strengthening good governance – Over the last three years, the CFUG has maintained good governance by focusing on transparency and accountability, and participation of CFUG members with the assistance of SAMARPAN, FECOFUN, and the Human Welfare and Environment Conservation Centre. It has had a positive impact on community forestry. As a result, participation of women, disadvantaged, and marginalised groups has increased in community forestry programmes.

Advocacy campaign – The CFUG has been running an advocacy programme on community forestry issues and participating in the programmes launched by the district and central level of FECOFUN. Consequently, the user group members actively participated in district and national-level movements against the unreasonable taxation imposed by the government on products from community forests.

Promotion of traditional culture – The CFUG has also been supporting local, traditional culture.

Supply of forest products – With management and promotion of the community forest, the user group has been supplying forest products to meet the demands of forest users. For the fiscal year 2003/04, the collection and distribution of timber and other forest products are shown in Table 4.

Table 4: Collection and distribution of timber														
Timber		Danda		Bala		Pole		Khama		Wood		Grass		Fodder	
cft	HH	No.	HH	No.	HH	No.	HH	No.	HH	No.	HH	L	HH	L	HH
1159.81	96	1139	80	12	10	1	1	54	26	2395	342	40	20	622	124

cft = cubic feet, HH = h ouseholds, No . = number; L = headload
Note*: Danda, Bala and Khama are different sizes of small timber used for house construction
Source: Gadibaraha CFUG Reports (2000 -2004)

Awards

The user group has been awarded for its commendable work. A selection of the awards received is given in Table 5.

Self-assessment of the group

The CFUG held an interaction workshop for self-assessment and to assess the weaknesses and challenges of the CFUG in a participatory way. The strengths, weaknesses, opportunities, and threats identified are shown in Table 6.

Table 5: Awards received by the CFUG			
Date	**Events**	**Organiser**	**Awards**
1999	Quiz Contest	Tulsipur CFUG and Mahila Namuna CFUG	First
2000	Essay contest	Tulsipur CFUG Coordination Committee and Saraswoti CFUG	First
2000	Dohari Geet	Tulsipur CFUG Coordinatio n Committee,	Second
2000	10-metre race	CARE Nepal	First
2000	Quiz Contest	District Watershed Office	Second
2000	Poem competition	Tulsipur CFUG Coordination Committee	Third
1999/2000	Follow-up and Evaluation	Tulsipur CFUG Coordination Committee	Second
2001	Quiz Contest	Tulsipur CFUG Coordination Committee	First
2001/2002	Follow-up and Evaluation	Tulsipur CFUG Coordination Committee	First
2001	Poetry competition	Tulsipur CFUG Coordination Committee	First
	Follow-up and Evaluation	District Forest Offi ce	First, NRs. 3000
2001/2002	Follow-up and Evaluation	Tulsipur CFUG Coordination Committee	First
2003	World Environment Day Essay Contest	District Watershed Conservation Office and Tulsipur CFUG Coordination Committee	First
2003	Dohari geet (male-female two-way song competition) festival	Link for the Agricultural Development Association	Second
2003	District jhanki (cultural demonstration) programme	Link for the Agricultural Development Association	First
Source: Gadibaraha CFUG Reports (2000 -2004)			

Financial situation

The CFUG is trying to strengthen its financial situation in order to carry out community development and poverty alleviation programmes. For this purpose, it has been diversifying its income sources. The financial situation of the CFUG is shown in Tables 7a and 7b. The main source of income is the sale of forest products. Other income is generated from grant assistance and miscellaneous sources. From this income, the CFUG has spent a substantial amount on forest management. The reminder was used for community development and administrative work.

Current challenges

Insurgency is one of the most serious challenges to community forestry in Nepal. Due to this insurgency in a rural setting, both the security personnel and the Maoists are trying to increase their power by capturing the natural resources and the income from them. The forests are battlegrounds for both parties: the security personnel and the Maoists. The local community people are afraid of entering the community forest, primarily because of lack of security.

Impact of conflict on the community forest

A Royal Nepal Army camp has been established in Tulsipu; it is one of the biggest army camps in the district. It is prepared to control large areas of Gadibaraha, Shree

Table 6: SWOT analysis of the CFUG

Strengths	Weaknesses
▪ Improvement in forest condition due to conservation ▪ Smooth supply of forest products to its users ▪ Income generation programmes for disadvantaged groups, women, and the poor ▪ Strengthening the worki ng modality of user groups and social awareness ▪ Improvement in biodiversity and environmental conservation ▪ Improvement in watershed and soil conservation ▪ Improvement in community infrastructure ▪ Linkages with government and non -government organisations ▪ Human resource development ▪ Construction and implementation of a forestry management demonstration plot and nursery ▪ Advocacy programme for women's empowerment. ▪ Community and adult literacy programme ▪ Good governance strengthening programme	▪ Timber demands of users are not adequately addressed. ▪ The forest user group fund is not sufficiently mobilised for poverty alleviation ▪ Smuggling of forest products by some users
Opportunities	**Threats**
▪ A lot of scope for employment generation and income generation for th e poor, women, and disadvantaged groups. ▪ A good forum for exercising democratic norms ▪ A good institution for strengthening the capacity of women, the poor, and disadvantaged groups ▪ A good mechanism to conserve sub -watersheds and for soil conservation ▪ A forum for implementing community development programmes	▪ Seizure of the community forest by security personnel and the Royal Nepal Army ▪ Maoist pressure to contribute donations from the users' fund ▪ Unavailability of technical support for management of the forest ▪ Frequent changes in forestry laws and guidelines against the interests of the user.

Table 7a: Income status of the CFUG

Income source	2000/01	2001/02	2002/03	2003/04	Total
Fees from forest products	149,438	157,114	151,912	19,665	478,128
Grant assistance	28,153	13,000	116,579	11,000	168,732
Other income	70,222	15,557	7,682	9,690	103,151
Total income	**247,813**	**185,671**	**276,173**	**40,355**	**750,011**

Source: Gadibaraha CFUG Reports (2000 -2004)

Table 7b: Expenditure statement [a]

Expenditure	2000/01	2001/02	2002/03	2003/04	Total
Forestry management	41,402	49,818	44,200	22,513	157,933
Forest protection	13,799	43,500	41,482	-	98,782
Administration	15,473	58,122	37,385	43,216	154,195
Community development	-	-	110,610	17,843	128,453
Total	**209,928**	**151,440**	**233,677**	**83,573**	**539,363**

[a Note: Some of the values in this table are inconsistent with the total values, ed.]
Source: Gadibaraha CFUG Reports (2000 -2004)

Ganesh, Dharapani, Jarayo Takuri, and Gairakhali Hariyali community forests on the grounds of security.

About 20-25 years ago, these forests were barren land and deforested areas. The local communities invested a lot of their time and resources in conserving these forest areas. The forest condition has improved remarkably. Therefore, these CFUGs are not ready to give up their rights over the forest areas and are lobbying with civil societies and requesting the central government to intervene on their behalf. If the security personnel take over the community forests, any one of the following may occur.

- The local community will not be able to collect and use the basic forest products.
- The Royal Nepal Army will lose the trust of the local communities.
- It will directly affect the trust in the community forestry movement and people's participation.
- It will be an encroachment on the rights of the community forestry user groups against the provisions laid down in the Constitution of the Kingdom of Nepal 1990, Forest Policy 1989, Forest Act 1993, and Forest Regulations 1995.

Recommendations

During the case study, the researcher faced many problems, but the most important issue was army intervention in the community forest. Therefore, the researcher makes the following recommendations.

Identification of alternative areas for military use – There is lots of other land which is not being used or is underused. The following types of land could be used for the army camp.

- Lands registered under the various government agencies but not used
- Barren and uncultivated common lands
- Land located near rivers and streams
- Areas of national forest not handed over as community forest

Peace talks – Peace talks are the only possible solution to the conflict in Nepal. Political parties and civil society organisations should put pressure on the government and the Maoists to hold peace talks to manage the conflicts in the country.

Conclusions

Community forestry has made some marvellous achievements, and there are unprecedented opportunities. Attempts have been made to address the issues of women and marginalised groups and poverty alleviation. Gadibarah CFUG is facing the serious challenge of losing its forests to security personnel along with other CFUGs in Nepal. Although the policy and legal environment for community forestry in Nepal is very favourable to CFUGs, it has yet to be respected by all sectors and actors.

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Lessons from other Community-based Natural Resource Management Programmes in the Asian Region

Social forestry has great potential for success in Bhutan: a typical village in Bumthang, Bhutan

Community Forestry in Bhutan: Experiences and the Way Forward

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Abstract

This paper provides a brief history of the evolution of forest policy in Bhutan, particularly in relation to the development of social forestry, and then presents the findings of a nationwide study* on community forestry (CF)[20]. Forestry in Bhutan has a long history of communal management. However, modern concepts of CF are a recent introduction with the establishment of the first CF in 1997. Despite this slow beginning, today there are 23 approved CFs in various stages of operation. The CF study involved visits to 15 CFs in the country. Some of the main findings of the study are as follow.

a) *The prevailing government policies and legislation are conducive to promotion of CF programmes in Bhutan.*

b) *The community forestry management groups (CFMGs) are managing the forests in a responsible and conservative manner and in general they are following the prescriptions of the approved management plan.*

c) *The capacity of stakeholders, including the communities and forestry extension staff in various fields, needs improving, particularly in forest management planning, operational aspects, and community mobilisation skills.*

d) *Community forestry has the potential to contribute towards environmental conservation, livelihood improvement, and complementing the government's efforts towards decentralisation and to ensure people's participation.*

e) *The principles and approaches of CF should be applied to manage forest resources other than trees: resources that are important for increasing rural incomes and sustaining rural livelihoods.*

f) *Strategies and mechanisms should be put in place to address potential issues concerning inequities – among the CFMG members, between CFMGs and non-members, and between resource rich and poor villages.*

Introduction to Bhutan

Geography and socioeconomic background

The Kingdom of Bhutan is located in the eastern Himalayan region between the Tibet Autonomous Region of China in the north and north-west and India in the south and east. Bhutan is a landlocked country amidst some of the most formidable mountainous terrain in the world, rising from 160 metres above sea level (masl) in the south to above 7,550 masl in the north. Flat areas are scarce and are limited to the deep river valleys. Geophysically, Bhutan can be divided into three distinct zones – the lower southern foothills adjoining the Indian plains; the central belt in the inner Himalayas; and the northern uplands within the Great Himalayas.

ICIMOD Partnership Platforms 2/06 (S)

Bhutan is largely an agrarian society. An estimated 79% of the population still live in rural areas. The renewable natural resource (RNR) sector – which represents agriculture, livestock, and forestry – remains one of the most important sectors, contributing almost 35.9% of the gross domestic product in 2000. Since the mid-1980s the power sector, which largely relies on hydropower production, became the highest contributor to Bhutan's annual revenue with a total contribution estimated at 45% of the total revenue.

Administrative and political scenario

Although the official, recorded history of Bhutan dates back to the 17th century, the present-day administrative and political institutions of Bhutan were conceived in 1907 with the institution of a hereditary monarchy. Since then, the Bhutanese political system has undergone a series of reforms. The reform process is being undertaken with the core objective of establishing an appropriate decentralised political and administrative framework that will enable people at the grassroots' level to participate in decision-making processes and promote development that is 'sensitive to people's needs'. Administratively, Bhutan is divided into 20 dzongkhags or districts which are further sub-divided in to 201 geogs or blocks. At both these levels, there are political institutions, namely the dzongkhag yargye tshogdue in each district and geog yargye tshogchung in each of the blocks, and these are given legal recognition and authority through the respective chathrims or acts. The highest legislative body in the country is the Gyalyong Tshogdue Chhenmo – the National Assembly. The National Assembly is constituted of members from the Executive Body (government ministers and royal advisory councillors), representatives from the monastic order and armed forces, and people's representatives – who are members of the dzongkhag yargye tshogdue. In another significant development, the Kingdom is in the final stages of drafting a constitution.

Forests and forestry in Bhutan

The socioeconomic role of forests in Bhutan

Forests are an integral part of the life of traditional Bhutanese farming communities. The practice of subsistence farming relies heavily on keeping a balance between agriculture, livestock, and forestry. Farmers and farm communities rely on the forests for various services and products: grazing for domestic animals; timber and fuelwood for local households; organic manure in the form of leaf litter; and making agricultural implements. Forests play a vital role in sustaining rural livelihoods. Non-wood forest products are an invaluable source of rural food supplies. In some regions, medicinal and food crops from the forests form a major source of people's incomes.

Forests in Bhutan are also valued for their many ecological services. They are vital for maintaining the geologically fragile mountain ecosystems. The sustainability of hydropower as the primary source of national revenue is critically pinned on the management of water catchments and their forest ecosystems. Bhutan's rich biodiversity and spectacular landscapes have also made it one of the premier tourist destinations in the world. Earnings from the tourism industry accounted for almost 15 to 20% of the total foreign currency earnings in 1999. Despite the ban on commercial timber exports[*], the forest industry accounts for almost 26% of the total gross domestic product contribution from the agricultural sector. This is mainly as a result of

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[*] In January 1999, the government introduced a new timber marketing and pricing policy which effectively banned the export of logs and sawn timber in a bid to relieve pressure on forests from commercial (export) demands and encourage local wood-processing industries.

increasing demand for timber in the domestic construction industry; as well as an increasing demand for firewood and non-wood forest products such as bamboo, mushrooms, and cane in the domestic market.

The wide elevation range results in a diverse range of forest types, including tropical, subtropical, warm temperate, cool temperate, sub-alpine, and alpine. Approximately 72% of the country is forested, and 26% of the country has been protected as a network of national parks and nature reserves. The national parks and reserves are connected with biological corridors which account for about 9% of the forest area. The long-term goal of the forestry sector in Bhutan is to bring the whole forest area under some form of scientific management. Three forest management strategies are currently being implemented in Bhutan: forest management units – primarily for production and afforestation activities; protected areas – for conservation purposes; and social forestry – for community-based forest management. Very recently the Department of Forests has also proposed to bring other areas of the government reserve forest, which are primarily used for supply of subsidised rural timber, under some form of scientific management (Annex 1).

Forests also have a significant place in Bhutanese culture. Spiritually, the forests are a revered repository of traditional beliefs and customs and a rich source of myth, legend, and folklore. Nature is not only respected but also understood as a living mysticism in Buddhist belief systems. Many well-known mountains, lakes, rivers, forests, gorges, and wild animals are believed to be sacred. In some instances, these natural objects are thought to represent different spirits and deities, or sacred sites. These traditional Bhutanese cultural beliefs and practices, seeded in Buddhists beliefs and values, place great emphasis on reverence towards the natural environment and consequently on the conservation and wise use of its many resources.

Evolution of forest policy and practices in Bhutan

In retrospect, development of the forestry sector in Bhutan largely mirrors the global trends in forestry, albeit in different timeframes. Three major phases can be identified in the national development process each of which have had significant influence in shaping Bhutanese forest regimes.

Forestry prior to 1961
The first phase represents the era prior to 1961, before the introduction of planned development in Bhutan. Until then, there was no formal policy or legislation governing forest use and management. Local people managed forests and held traditional rights to use local forest resources. For instance, access to timber for house construction, collection of firewood, and grazing cattle in the forests were seen as an inalienable right of the people. Even today, rural households are eligible for subsidised firewood annually and for house construction timber once in every 25 years. Customary rules giving communities and households rights to access and use of designated government reserved forests, such as sokshing and tsamdro, are still being practised in Bhutan.

Forest management was governed by various, locally-established institutions which were highly influenced by Buddhist values and belief systems. Forest land-use practices were not only determined by the subsistence needs of communities, but were also based on a sound understanding of the local social, ecological, and physical capabilities of the land. They engendered a high degree of communal responsibility towards sustainable management of local forest resources, enforced through a complex integration of social values and the religious belief system.

The combined effect of versatile traditional resource management institutions, the inherently rugged terrain which hindered accessibility, the low population density, and the limitations of forest use at a subsistence level contributed to the conservation and judicious use of forest resources during the period.

Forestry in the era of planned development: post 1961
In 1961, Bhutan embarked on the process of planned economic development and launched its first Five-Year Plan*. The advent of modern development planning and subsequent changes that it brought to the sociopolitical and economic aspects of Bhutan had profound implications for forests and forestry. The period from the 1960s to the mid-1980s saw significant changes in the purpose of forests and their management strategies. Many of these changes resemble the notion of industrial forestry, propagated during the post-World War II era in the developed countries, and later in many developing countries under post-colonial regimes. The first significant change involved the shift in the purpose and legal status of the country's relatively rich forest resource base – from an inherently subsistence-oriented and communally-managed resource to a commercially-oriented and centrally-managed resource.

This change in the perception of forests to a potential source of national revenue was pursued with the enactment of the Bhutan Forest Act 1969. The Act legitimised government ownership and control over much of the forest land. Later the National Forest Policy 1974 underscored the role of forests in supplying raw materials for industries and generating income. The Act explicitly stated that:

> "...a major share of the contribution to the national exchequer will have to be from forest...Therefore, the starting premise of this policy [National Forest Policy 1974] should be that the entire forests belong to the State and there should not be any private right to any part of them."

Even in Bhutan, a country with a tradition of tolerance, this shift in forest management paradigm did not fare well. The period witnessed a gradual diminution of customary laws and local forest management institutions. The period witnessed a rise in forest degradation problems, and this was primarily due to the undermining of communal responsibility towards sustainable management of local resources and a rapid increase in demand for forest resources as a result of increases in both traditional and commercial usage.

Sustainable forest management and people's participation: recent developments
Sensing the approaching threat of rapid forest degradation, the government sought to redefine more systematic plans, policies, and legislation that would ensure the long-term sustainability of the forest resources in Bhutan. This led to the development of the new Bhutan Forest Policy of 1991 and the Forest and Nature Conservation Act of 1995. The primary goal envisaged in the new Forest Policy was to ensure that forest resources would be used according to sustainability principles and it gave conservation an overriding priority over other uses. Hence, it restated the goal of maintaining at least 60% of the country's area under forest cover in perpetuity.

However, the most significant contribution of the new Forest Policy of 1991 and the Act of 1995 is their emphasis on the need to reinvigorate traditional forestry institutions

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* The launching of the first Five Year Plan in 1961 marks the beginning of development planning in Bhutan. The Plan provides the broad macroeconomic framework, key national and sectoral guideline objectives, as well as the objectives strategies and financial outlays for each sector over a period of five years. Bhutan is currently in the process of implementing the ninth Five Year Plan (2002-2007).

and engage local communities in the management of local forests. It retracts the centralisation approach to forest management and commoditisation of forest resources promoted by the previous Forest Policy and Act. To this end, the Forest Act of 1995 clearly spells out the user rights of communities and individuals with regards to forest areas managed as sokshing and tsamdro, although it still maintains government ownership over such categories of forest. Further, to facilitate implementation of participatory forest management, a set of rules with regards to social and community forestry was also incorporated in the Forest and Nature Conservation Rules of 2003.

Emphasis on people's participation and the subsequent decentralisation of government administrative and political structures has had significant influence in shaping the present-day forest administration and management regimes in Bhutan. Primarily, it led to the establishment of a Forestry Extension Division within the Department of Forests in 1993 and the creation of Forestry Extension Offices in each of the dzongkhags (dzongkhag forest offices) and geogs (geog forestry extension offices), along with the existing divisional (territorial) forest offices (DFO). Following the creation of these forestry institutions at the dzongkhag and geog level, the Department of Forests developed a 'Framework for Implementation of Decentralised Forestry Activities' in 1997, whereby several forestry activities, perceived to be of a local nature and to have direct relevance to the sustenance of rural communities, were decentralized to the local dzongkhag administration, namely the dzongkhag yargye tshogdue. One of the key components of the decentralised forestry activities was the promotion of social forestry programmes. Social forestry in Bhutan is now pursued through two broad sub-programmes, as given below.

- Private forest involves promotion of plantation activities on individually-owned agricultural land (agroforestry) and other private land (woodlots). The Forest and Nature Conservation Rules of 2003 gives legal rights to landowners to harvest the trees after the landowner registers the land as a private forest.
- Community forest (CF) is defined as 'any area of Government Reserved Forest designated for management by a local community in accordance with the provisions of the Forest and Nature Conservation Rules 2003'.

Social forestry in Bhutan
The initial success of social forestry in Bhutan was supported by various policy and legal frameworks and with support from various national and international development partners.

Policy and legal frameworks

There is a strong legal basis in Bhutan supporting the shift towards greater community participation in the management of forest resources. The most important policy documents include the following.

- Royal Command on Social Forestry (1979)
- Social Forestry Day (1985): The Department of Forests declared Coronation Day, 2 June, Social Forestry Day, primarily aimed at promoting tree planting and creating environmental awareness among the Bhutanese youth.
- The Forest and Nature Conservation Act (1995) which provided the first legal basis for the new community and private forestry programmes, and through which communities can apply for legal rights to manage blocks of national forests in accordance with approved management plans and individual landowners can apply to manage private forests on their private land.

- The Forestry Sub-Sector Plan for the Ninth Plan Period (2002-2007) which included a substantially increased budget for participatory forest management (PFM) activities. The plan includes the following two new priorities for the plan period.
  - Encourage more sustainable management of forests by local communities through private and community forestry; and also through greater involvement in the management of forest management units and other national forests.
  - Strengthen the capability of the district extension staff to implement the recently decentralised forestry activities (RGoB 2002b).
- The Dzongkhag and Geog Development Committee Act of 2002 which authorised local authorities to play a greater role in the management of forest resources.
- The Forest and Nature Conservation Rules 2003 which further endorsed and refined the procedures for community and private forestry programmes.

Community forestry development partners

National partners
Communities and individual farmers – The Social Forestry Division is strengthening the capacity of local communities to use forestry resources on a sustainable basis, so that the key stakeholders are rural communities and individual farmers. It is recognised that rural communities are often mixed, comprising of different and overlapping interest groups (e.g., migratory herders, farmers, bamboo collectors) with different access to and control over resources. Care is taken to work with all interest groups, promoting the equitable distribution of benefits. Communities and individual farmers are the key stakeholders of the Division.

Local authorities – The planning of development activities is increasingly being decentralised to the local level – both at the dzongkhag and the geog levels. The Social Forestry Division attempts to strengthen the capability of local institutions to implement participatory forest management (PFM) activities.

Dzongkhag extension staff – The dzongkhag forestry extension workers are responsible for supporting local communities and local authorities in the implementation of PFM activities at the field level. The Social Forestry Division provides technical assistance and training to the extension staff, as well as financial support for the implementation of PFM activities.

Natural Resources' Training Institute – The Natural Resources' Training Institute is responsible for training all extension staff working with renewable natural resources, including forestry extension workers. The Natural Resources' Training Institute also has the mandate to conduct in-service training for forestry extension workers. The Social Forestry Division provides technical support to the Institute in the development of an in-service training programme.

Divisional forest officer – The DFO is responsible for assessing, identifying, and demarcating designated CFs from the government reserve forest. They are also responsible for providing assistance in the operational aspects of CF management and monitoring CF activities on behalf of the Department of Forests.

Forest Management Information Systems' Unit – The newly-established Forest Management Information Systems' Unit is responsible for establishing a computerised information management system to provide detailed information on the status of all PFM activities throughout the country. The Social Forestry Division assists the Unit in

operationalising forest managment information systems for PFM activities and seeks to make this information 'user friendly' so that it can be readily used by personnel at district and geog level, as well as by national-level planners.

International partners
The DoF is currently receiving support for the community forestry programme from three donors: Swiss Agency for Development and Cooperation (SDC), which is supporting the Participatory Forest Management Project; German Technical Cooperation (GTZ), which is supporting the Bhutan-German Sustainable Renewable Natural Resources' Development Project; and the European Union (EU), which is supporting the Wang Watershed Management Project. In the past support was also received from the Food and Agriculture Organization (FAO) and the World Bank.

The Social Forestry Division has been able to promote close coordination between the SDC, EU, and GTZ projects and the Ministry of Agriculture, which has led all three projects to be more efficient and productive. The three projects and the Division have collaborated in the organisation of in-service training programmes and the development of a series of community forestry manuals. The Third Forestry Development Project (1994-2000) supported by the World Bank had carried out the pioneering work on developing procedures for community forestry management planning, but a comprehensive manual was needed to provide more guidance to forestry extension staff. Each project and the Department of Forests concentrated on different aspects of the manual, and then shared the task of reviewing and publishing it.

Community forestry development in Bhutan

Beginning from the mid-1990s the Department of Forests, in collaboration with many key local organisations and international development partners, promoted CF as one of the major forest management regimes in the country. CF can best be described as forest management based on an agreement (the CF management plan) between an organised group of forest users, the CF management group (CFMG), and the Department of Forests whereby the group is given legitimate rights (CF certificates) to manage and use a designated area of government reserve forest as per the approved management plan.

The development of CF, which is also referred to as participatory forest management (PFM) in Bhutan, is given further impetus in the ongoing 9th Five Year Plan for the forestry sector. The 9th Plan defines PFM as "a broad development strategy or concept that can embrace diverse forms of local decision-making in all sorts of forestry matters that affect people's lives," (Buffum and Schaltenbrand 2002). PFM focuses on community forestry and community participation in the management of government forests, including forest management units which are primarily for commercial timber production. As envisaged in the 'Guidelines for Community Forestry Development in Bhutan, 1996', CF programmes are pursued with the long-term goals of contributing towards protection of forests, increasing the efficiency of production, and ensuring equitable access and distribution of forest resources. The immediate goals are to devolve the responsibility and authority of forest management from the state to the local communities and enhance their knowledge and skills to manage the forest on a sustainable basis.

Today there are 23 CFs for which the management plans have been approved and are at various stages of implementation. It is important to keep in mind that the scale of

the community forestry programme is relatively small in relation to the nearly three million ha of forests in the country. The 23 approved CFs cover an estimated 2,101 ha of government reserved forest and include about 1,141 households.

A comprehensive Manual for Community Forestry (Parts I, II, III & IV) was also developed. The manual describes the nine-step procedure for establishing and operationalising a CF: initiation of the CF process; application; review of application; acceptance of application; CF management plan preparation; submission of management plan and bye-laws; approval; implementation; and monitoring. Further, with the assistance of the national and international partners, most of the forestry extension staff and CFMGs were trained on various aspects of CF such as planning, administration, financial management, and silvicultural operations.

Thus, it is apparent that while the history of CF development in Bhutan is very recent, with the first CF in the country established only in 1997, implementation of CF activities in the field has taken place rapidly, particularly in the last few years.

Community forestry: reviews and studies

Past reviews and studies

When the Social Forestry Division for CF was established in July 2002, there was no available information to address the concerns. There were no systems in place to monitor the activities of the active CFs, and both positive and negative views about the community forestry programme were based on anecdotal evidence. The Third Forestry Development Project and the Food and Agriculture Organization (FAO) had carried out studies of the potential for community forestry, but these studies took place before the approval of the Forest and Nature Conservation Rules of 2000 and before the approval and handover of any community forests.

In April 2003, the Social Forestry Division supported an initial review of forest management by communities in Bhutan. This was the first study of its kind in Bhutan. A four-person study team from the Department of Forest and Participatory Forest Management Project staff visited six CFs in four districts in April 2003. Special attention was given to the two CFs that had already started harvesting timber. The team was favourably impressed by the initial experience with timber harvesting and reported that the management plans provided good guidance to the CFMGs. The CFMGs had followed a cautious approach to harvesting and had developed effective permit systems for controlling harvesting. At present, the CFMGs are harvesting below the levels in the management plans, and there does not appear to be any danger of over-harvesting.

The main weakness was in record keeping. The CFMGs were not maintaining adequate records, and many CF members were not aware of the status of the CFMG fund. The team strongly endorsed the efforts of the Social Forestry Division to provide increased guidance and support to the CFMGs in record keeping. In addition, the team identified a strong need for training in silviculture, both for the CFMGs and the dzongkhag forestry extension staff (Oberholzer et al. 2003). Based on this study, the Social Forestry Division expanded its efforts to develop record-keeping procedures for community forests and produced the 'Manual for Record Keeping by Community Forest Management Groups' in May 2003, and this was subsequently incorporated into the CF Manual Part 4.

A second initiative was to organise the first national workshop on the management of community forests, focusing on appropriate silvicultural approaches. The workshop

was attended by staff representing the dzongkhag forestry sectors and territorial forest divisions. The workshop covered a wide range of technical and social issues related to the management of community forests. Emphasis was given to developing practical means of applying silvicultural options in community forests. The workshop included field exercises in two community forests where the CFMG had been harvesting timber and other forest products for two years. The workshop evaluation was very favourable, and the training team and the participants concluded that the training should be repeated for other forestry field staff.

Community forestry study (2004/05)

Rationale for the study
Bhutanese foresters have strongly supported the CF programme. However, given that the programme is still in its infancy, it is only appropriate that a cautious pace of development be adopted in order to avoid any potential pitfalls. Some of the key concerns and issues are as follows.

- The conduciveness of the current policy and legal frameworks in expanding and strengthening the CF programmes (the views are contradictory – some feel it is too relaxed while others feel it is restrictive)
- The level of skills and motivation of CFMGs to manage the forests on a sustainable basis and prevent over-harvesting and degradation of the CFs
- The risk of increasing pressure on government reserved forests (forests outside CFs) as a result of strong protection of CFs by the CFMGs, and users sourcing their requirements from the government reserved forest (in view of the traditional rights of access by rural communities including the CFMGs), possibilities of disparities between resource rich and poor geogs and villages, and inequities between CFMG members and non-members
- The possibility of disparities arising amongst the CFMG members as a result of elite domination in the decision-making processes and marginalisation of poorer members, which could lead to inequities among members

Study methodology
The 2004/05 Community Forestry Study covered 15 CFs in all regions of the country and was carried out by a team of four staff from the Department of Forestry/Council for Renewable Natural Resources, Research of Bhutan (CoRRB), with inputs at some sites from the staff of the three projects supporting CF. Funding and technical inputs for the study were provided by the Participatory Forest Management Project and Bhutan-German Sustainable Renewable Natural Resource Project. The study team visited 14 CFs that were in operation and one which was still in the planning phase. At each site the team carried out a strengths, weaknesses, opportunities, threats analysis, based on discussions with the CFMG and dzongkhag forest officer and a field visit to the CF, and prepared a set of recommendations.

Study findings
The preliminary findings of the study revealed that the CFMGs were continuing to manage their CFs in a cautious and sustainable manner. Record keeping and knowledge of silviculture had greatly increased since the 2003 study, mostly as the result of intensive training of extension staff. The CF programme was supporting the decentralisation process, and the existence of enabling policies provided positive support to the CF programme.

Nevertheless, the team reported that the CFMGs still required increased training and support from the dzongkhag staff. Frequent revisions of Forest and Nature

Conservation Rules were undermining the confidence of forestry staff at the field level, and more importantly leading to mistrust by communities. The CFMG expectations regarding the future cash benefits from the CF were sometimes unrealistic, which might have caused them to ignore other income generation opportunities. Finally, the CF planning process appeared to have been strongly driven by the forestry staff rather than the communities taking the initiative.

The team offered a number of recommendations which focused on strengthening the capability of the extension staff to provide more effective training to the CFMGs and increasing the role of women in the CFMG committees. A summary of the analyses and recommendations for the study sites is provided in Annexes 2 and 3.

Analysis

Achievements
The Social Forestry Division expects that the community forestry programme will achieve impact in terms of environmental conditions, livelihood security, and empowerment of stakeholders. Unfortunately the Division has not yet been able to fully document the impact in this regard, even though this type of documentation is an important objective for the next two years. Nevertheless, there are some positive indications that impact in these areas is indeed possible.

Environmental conditions
One of the fundamental assumptions of the community forestry programme is that the condition of the forests will improve if local communities are given legal management rights, because they will have an incentive to invest in the long-term management of the forests. Improvements in the condition of forests after handing them over to community management have already been well documented in Nepal and other countries. Since community forestry is relatively new in Bhutan, there is no empirical evidence as yet to support or refute this assumption. However, the initial indications seem to be that the communities are in fact managing their community forests sustainably and that the forest condition of several forests has indeed improved since handing over the management responsibility to the communities.

- The studies on harvesting in CFs concluded that CFs have the potential for increased long-term production, and it appears that the standing volume of CFs will increase over time.
- The first CF in Bhutan, which was handed over in 1997, is located in an area that is regularly affected by forest fires which are purposefully lit by the communities to promote the growth of lemon grass and pasture grasses. There has not been a single instance of fire set inside the CF since the CFMG was given authority and responsibility to fine persons caught lighting fires.
- Many foresters have reported a visible increase in forest cover in the initial CFs.
- The CFMG members report that the forest condition has improved since they have started to regulate harvesting of forest products and grazing in the CFs.
- Foresters report that the CFs follow much stricter rules and cautiously mark trees inside the CFs.

Livelihood security
Interviews with CFMG members have revealed three major ways in which the communities benefit from the community forestry programme.

- They have easy access to timber and forest products. All Bhutanese citizens have the right to request timber and forest products from national forests, but they have

to follow a long approval process that involves visits to several forestry offices and can take weeks or even months to complete. If they are members of an approved CF, they can meet their needs from the community forest following a much simpler approval process.

- They can ensure that the forest near their village will be able to meet their future needs for forest products. Many forests located near roads are being over-harvested by outsiders, and the communities have already come to know that their local forests will become degraded. Once the CF is handed over, the CFMG assumes legal rights to exclude outsiders from harvesting in the CF which greatly increases the chances of maintaining the long-term productivity of the forest.
- Some CFMGs will have the opportunity to generate income by selling timber outside the CFMG. The Department of Forests will only allow this if the CFMG can demonstrate that the CF can meet all local demands for forest products.

Empowerment of stakeholders
The Royal Government of Bhutan has embarked on a major decentralisation programme which involves the reorganisation of government administrative responsibilities based on the district administrations. The stated objective is to reduce dependence upon the central government and return more autonomy and responsibilities to the local levels. A continuing and cautious decentralisation of forestry programmes to the districts is an important part of the 9th Five Year Plan strategy. In addition, the geogs now have responsibility for preparing their own development Plans for the 9th Plan period, many of which include decentralised forestry activities such as the establishment of community forests.

The community forestry programme is an excellent example of decentralisation at work. It involves a totally new relationship between the Department of Forests and the local communities, whereby the communities have direct responsibility for managing a valuable national asset and the Department plays a facilitation and extension role. Of course the Department still maintains the right to monitor the activities of the CFMG, and even to cancel the community forest management plan if the CFMG does not follow the management prescriptions in the approved management plan. Nevertheless, the community forestry programme is a marked departure from the former approach of central management of all national forests, and the initial impression of many observers is that the CFMGs have indeed been feeling significantly empowered since they have been given responsibility for managing their community forests.

Challenges and strategies
The Social Forestry Division is striving to ensure that the community forestry programme can be replicated outside the project-supported districts. The Participatory Forest Management Project is supporting seven of Bhutan's 20 districts and the EU and GTZ projects are supporting four and two districts respectively, leaving seven districts without any project support. The Social Forestry Division has requested the projects to support the participation of forestry extension staff from these seven 'non-project' districts in all major training courses, and has also been supplying them with manuals, training materials, and basic technical equipment. Several well-motivated extension staff in the non-project districts have already started community forestry activities.

The replicability of the community forestry activities can be best seen in the districts that already have approved community forests. Initially the communities were sceptical about whether the Department of Forests would actually hand over (partly) well-stocked forests along with degraded for community management, as the initial community forests were very degraded and did not have any potential for timber harvesting during

the initial management plan period. However, after the Department started to approve the hand-over of well-stocked forests, the interest of other communities increased dramatically and now the forestry extension people are receiving many more applications for community forests than they can respond to.

The experience to date indicates that increasing participation in local governance related to forest management will indeed translate directly into both improved livelihood security and better environmental management. But this can only happen in the proper enabling environment. A few critical elements of the proper enabling environment are listed below.

First of all, the community has to be given clear legal rights to manage the resource. This is not a problem in Bhutan, as the government has issued clear guidelines for the implementation of the community forestry programme.

The forest resources handed over to the community must have a perceived value that justifies the required investment of time and labour by the community. The Forest and Nature Conservation Rules of 2003 specify that a community forest should be within proximity of the village settlements.

The community must be given adequate technical support during the initial years of the implementation of their plan. Bhutanese villagers know their forests well, and in many cases they continued to practise the indigenous forest management approaches used before the nationalisation of the forests in 1969. But villagers are often weak in record keeping and financial management, and many CFMGs will not be able to function effectively without strong support from the dzongkhag extension services.

The CFMGs in Bhutan will need strong technical support, particularly in the area of record keeping and silviculture. CFMGs with relatively well-stocked forests should be financially self-sustaining after even a short period of time. The first two CFMGs that started harvesting timber are already generating revenue from the issuance of timber permits to members and from donations from visitors. This income should be adequate to cover their forest improvement activities and, if they start selling excess timber to non-members, the CFMG should be able to pay cash dividends to the members. However, not all CFMGs are fortunate enough for them to have such productive CFs. Many communities are not surrounded by forests stocked well enough for them to benefit from the timber resources immediately, but they can get other benefits as described above. Many early CFs were established with the objective of protecting drinking water sources or improving the condition of a highly degraded forest. These CFs will require financial support for a number of years.

The Ministry of Agriculture of the Royal Government of Bhutan is very concerned about equity issues related to community forestry. Although villages tend to be much more ethnically homogenous than in other Asian countries, it is not uncommon for village elites to dominate local decision-making. The Department of Forests has been carefully observing the second generation equity problems that have emerged in neighbouring countries and is determined to avoid similar problems in Bhutan.

During the early years of the community forestry programme, it is important for the Social Forestry Division to carefully monitor the experience of the first CFMGs and document them in order to quickly respond to any emerging problems. But over time, as the number of CFs increases, the government will not be able to devote as much

time and financial resources to each CF. Therefore, it is important for the Division to look for ways to support flexible and responsive processes within the CFMGs that enable social learning and adaptive management in environmental decision-making. Eventually, the CFMGs will have to rely on their own resources.

Government reserve forests have multiple uses. For example, they are used for supplying rural construction timber and fuelwood, and timber for government projects, and at the same time they are also used for establishment of community forests. Given the overlapping and often complementary nature of these land uses and access rights, there is a potential for applying an integrated planning process in the sustainable management of such forests, taking into consideration the different uses and rights.

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Annex 1: Management of Forests outside Forest Management Units, Protected Areas and Community Forests

In Bhutan there are four different types of forest management.
1. Management of forest management units on a commercial basis
2. Management of community/private forests
3. National parks and conservation areas
4. (Rural) supply of wood from unmanaged forests

While for the first three categories the forests are managed on a sustainable basis according to a well-developed forest management planning and implementation system (including management plans for the national parks), no such system is in place for management of the wood needed by rural people.

The Forest Resources' Potential Assessment, which is currently undertaken by the Forest Resources' Development Division with technical and financial support from GTZ, shows that an estimated 250,000 ha are currently used for rural wood supply, an area which is almost 1.6 times as high as the total area of all forest management units together. The overall amount of wood supplied from these areas is estimated at about 250 to 300 thousand m^3 per year (twice as much as the current output of forest management units).

The allocation of wood from areas outside forest management units is managed on an ad hoc basis. Manual wood extraction in mountainous areas is very tedious, therefore forests close to the settlements are heavily overused. As there is no monitoring system in place, it is not known which areas have already been exploited and to what extent. Wood is supplied on a quota system for firewood and construction timber. As such, wood allocation is mainly driven by the needs and requirements (and entitlements) of the people rather than by the resource's potential and capacity. As the quotas are too low, especially for firewood in areas located at higher altitudes, a considerable amount of wood is extracted by self-collection in an uncontrolled manner. Finally, the condition and production potential of the forest areas used for local supply is unknown. It is a common experience that forests in the immediate vicinity of settlements are heavily degraded, due to over-exploitation and intensive cattle browsing. This has already led in some cases to the destruction of the forest, especially of mature and over-mature fir forests.

The problem of forest degradation because of rural wood supplies is well known in Bhutan. However, the only attempts made so far to solve the problem have been by reducing the local demand for wood; among others, by encouraging the use of gas for cooking and of electric heaters. Up to now, no sustainable management system has been developed which enables the sustainable use of the forest. It has to be pointed out here that the use of wood is an indispensable requirement for the rural household and it would be an illusion to assume that the demand for it can be reduced considerably in future. On the other hand, the question may be raised concerning whether this is desirable at all? Wood is a regenerative resource for construction material and energy supplies and can be produced in a sustainable way in perpetuity without negative impacts on the environment if done in a proper way. The estimated wood demand of about $1-1.3 \ m^3/ha$ is far below the potential average increment (which may be as high as $4-6 \ m^3/ha$ depending on the forest type). As such, the problem is not the demand for wood, but the way the wood is produced and harvested. What is

needed now is a proper forest management system that regulates and allocates the rural supply of wood in a sustainable way based on the prevailing forest function and the production potential and capacity of the forest resources.

Within the scope of developing a participatory forest management plan for Lingmuteychhu watershed, a simple management system has been developed which could be easily modified and adapted for rural supply. The system developed is very simple and could be easily integrated into the current administrative system and working responsibilities of the territorial forestry service. It would require very little investment in terms of training in the beginning, but once integrated into the curricula of the Natural Resources Training Institute and Bhutan Forest Institute it would become part of the general education of future forestry staff. The cost of equipment and materials would be negligible.

The concept of the proposed management system was introduced during a presentation by SDC on management planning to the Department of Forests, Ministry of Agriculture (chaired by the Director General of Forests). The issue was intensively discussed and the audience concluded that the concept proposed would be feasible and bring about a considerable improvement in the sustainable management of the forest resources of Bhutan. It was proposed that the system should be modified for rural supply and introduced as a test into one watershed area in a territorial division (in the Bhutan-German Sustainable Renewable Natural Resource project area). If the test is successful, then the system will be introduced throughout the country.

What steps are required next are adaptation of the concept for rural supply on a watershed basis, modification of forest function mapping (simplified systems without using geographic information systems), training of key staff from one selected territorial division, testing of feasibility and practicability, preparation of training materials, and introduction into the curricula of foresters training at the Natural Resources Training Institute and Bhutan Forest Institute.

Characteristics of the management system
* Watershed based
* Identification of protection areas (modified function mapping)
* Compartmentalisation of forests according to forest types and current use (i.e., village forests, management objectives) based on a simple rapid rural appraisal
* Compartment-wise resource assessment to identify the forest resource condition, the current use, and the future production potential for various wood and non-wood products. To be done by beat officers as an integral part of their normal work.
* Preparation of a simple 10-year management plan by compiling compartment information using pocket calculators or Excel spreadsheets
* Establishment of a monitoring system for resource use

Annex 2: Results of the SWOT analysis from the community forestry study

Strengths	Opportunities
• Enabling policies are in place and provide positive support for community - based resource management, for example, the 1993 decentralisation of the CF Programme to district level, and the policy framework (Forest and Nature Conservation Act 199 5 and the Forest and Nature Conservation Rules 2003)	• Potential proper use and management of forest resources, income generation, and improvement of rural livelihoods
• The CF Guidelines support the policy of decentralisation of forestry programmes by empowering the CF user groups through the approval of CF management plans.	• Address gender issues, including the need for women's inclusion in CFMG management committees.
• Initiation of the CF programme has created a n opportunity for CFMGs to develop their skills and knowledge, especially in record -keeping, work planning, and forest management.	• Potential to resolve other issues and conflicts within the community
• The CF process has strengthened community cohesiveness, sense of responsibili ty, and accountability towards forest managemen t. The CFMGs have formulated effective internal monitoring systems.	• Equitable distribution of benefits from the CF
• Plantation in degraded areas of the CF shares responsibility and investment with the Department of Forests and contributes to forest cover.	• Self-sufficiency in forest produ cts could reduce dependency on government reserve f orests.
• CF development has strengthened the links betwee n forestry officers and communities.	• CF can offer employment opportunities for school leavers and mitigate rural -urban migration.
• The CF programme supports the traditional management systems that existed for decades before the nationalisation of the forest resources in 1969.	• The CF programme encourages CFMG; members to commit themselves to sh oulder the management and responsibility of CF activities.
• The CF programme recognises the involvement of women in decision -making and resource management.	• Providing on -the-job training on forestry activities to CFMG s is educative and impact oriented.
• Protection of local resources and benefit -sharing address some of the equity issues.	• Potential to diversify forest management with good experiences gained from CF management.
• CF management by the communities demonstrates a model to neighbouring villages and shows that resource management is crucial for the benefit of future generations.	• Creates opp ortunity for the CFMG to participate in study tours and get exposure to other development activities in the country.
• Formation of CFMGs and use of resources within CFs enhance income generation and improve fund management, contributing to the development of the community.	cont.

Annex 2, cont.

Weaknesses (internal constraints)	Threats (external constraints)
• Frequent revision of Forest and Nature Conservation Rules undermines the confidence of forestry staff at the field level and leads to mistrust by communities. • Implementation of activities in the CFs is not always consistent with the prescriptions in management plans. • CFMGs lack clear and detailed understanding of Policies, Acts, and Rules. • CFMGs lack capacity in the preparation of CF management plans and in the implementation of certain activities like silviculture and record keeping. • The CF planning process has been strongly driven by forestry staff rather than the community taking the initiative. • The existence of separate district forest and and dzongkag forest offices in the field confuses the communities about the supply of forest products from CF forest versus state forest.	• CFMG expectations regarding the cash benefits from the CF may be unrealistic and cause them to ignore other income generation opportunities. • Inconsistent policies and rules pose uncertainty for CFMGs. • If the management plans are not followed closely, there is a danger of over-harvesting forest resources from the CFs. • Existence of two forest offices at the field level (district and dzongkag forest offices) may create confusion in responsibility for monitoring and evaluation of CFs. • Evolving and ambiguous policies trigger uncertainty among CFMG members about the government's intentions regarding CF. • The policy is not clear regarding whether the CFMG can increase the areas of a CF area in response to an increase in population and number of households. • Future conflicts may arise regarding rights to use the resources if all the issues are not made clear during the process of CF planning and approval.

Annex 3. Recommendations of the community forest study

1. The community forest programme in Bhutan is in the process of learning and developing. Whilst moving this programme forward as per the needs of the communities, it is very important to find a balance between strengthening the capacity of the communities to manage the forest and setting an appropriate pace for CF development.

2. Regular awareness workshops on recent policy developments affecting CF, such as revision of Acts and Rules, need to be conducted for the CFMGs. Copies of the Forest and Nature Conservation Act and Rules should be provided to geog forestry extension agents and CFMGs.

3. CF Guidelines (such as the CF Manual) need to be translated into the Dzongkha language and provided to the CFMG, so that they can become more aware of the CF planning process and can strengthen their capacities.

4. Capacity building in different fields for different levels, such as silviculture, record keeping, gender, and organisational management, is fundamental for sustainable management of CFs and should be conducted for CFMGs.

5. Forestry staff members at the field level need training on communication skills, global positioning systems (GPS), and training of trainers to deliver services effectively to the communities.

6. CF training modules/materials should be developed and provided to the field offices.

7. Participation of women in CF is very important, as most CF products are harvested and used by them. It is necessary to have more women on CFMG committees.

8. Institutionalisation of coordination mechanisms for CF programmes and activities in the district (dzongkhag), park, and divisional forests is needed through regular coordination workshops.

9. The CF area ceiling of 2.5 ha per household stipulated in the Forest and Nature Conservation Rules (FNCR 2003) should be flexible in response to local conditions.

10. Choice of species for plantation in the CFs should be selected based on the local conditions, and priority should be accorded to native species (excluding horticultural tree species which are not permitted in CF areas) that give multiple and maximum benefits. It is also very important for the geog forestry extension agents to assist the CFMGs in choice of species.

11. CFs should be established within proximity of village settlements to ensure easy access and direct benefits to the communities through sustainable management of forest resources around the settlements.

12. A discussion should be held about the rural wood supply and community forestry programme and how these can be integrated and complemented in the long run.

Plantation of fast-growing trees in degraded forests carried out through ICIMOD's PARDYP project (see next paper)

Creating Community Tenure: Policies and Institutions for Community-based Management

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Abstract

Defining and deconstructing land tenure is a complex process in South Asia. Tenure is overlapping. The same plot of land is perceived as having a different tenure status from state ownership to private ownership, depending on who is asked. Overlaps exist not only between the land use and use rights of various stakeholders but also between de jure and de facto tenure. Hence, getting a clear picture of the tenure stakeholders is the first step towards establishing a successful community-based land use and natural resource management approach like community forestry.

As actual use and use rights often overlap, management choices affect the interests of the various stakeholders. That is, the short-term and long-term goals of management and the technologies required to achieve them invariably affect tenure and shares received by competing claimants. Therefore, it is important that a co-management approach involving all stakeholders, and taking into account the interest of various groups through a negotiated process, is pursued while developing management plans.

Introduction

Understanding tenure systems and institutional arrangements is the key to successful community-based management of natural resources. This paper draws from the experiences of community-based forest and land management projects in India and Nepal and discusses how tenurial and institutional arrangements affect the use and management of resources.

Tenure categories

Several types of tenure exist in India and the region in general, because property rights on the same tract of land differ by product or usage. During a mission by the World Bank to study the feasibility of a forestry project in the Punjab, the question "Whose land is this?" was asked about a degraded area of forest or pasture land. Invariably, a number of answers came forth, depending on who was asked. The same land was claimed as state, communal, joint, or privately-owned, based on the respondent's background and interest. This contested ownership especially holds true of forest, grazing, and fallow lands.

Thus, in many respects, one can say that all tenure is joint. Commonly registered and less restrictive government and forest lands are most burdened by overlapping rights, while privately registered lands and reserved forests are least burdened. This distribution of overlapping claims by land use is represented graphically in Figure 1. Further analysis shows that de facto tenure of different land-use types is as common as de jure tenure, as can be seen in Figure 2.
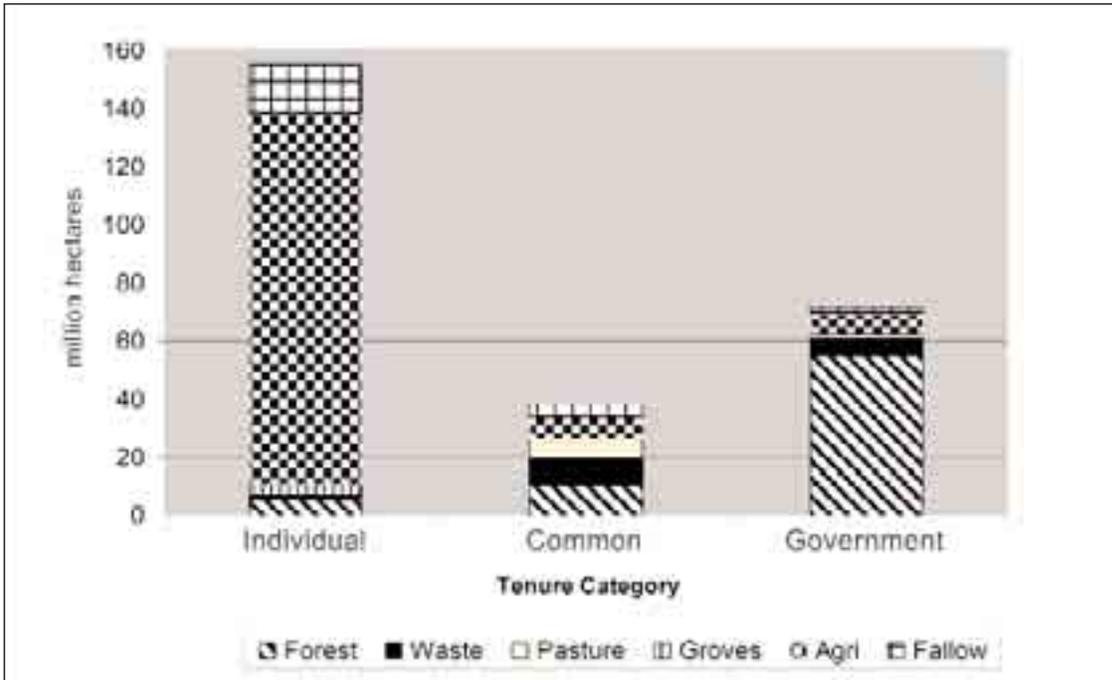
Figure 1: Tenure and use rights by land use (estimated averages)
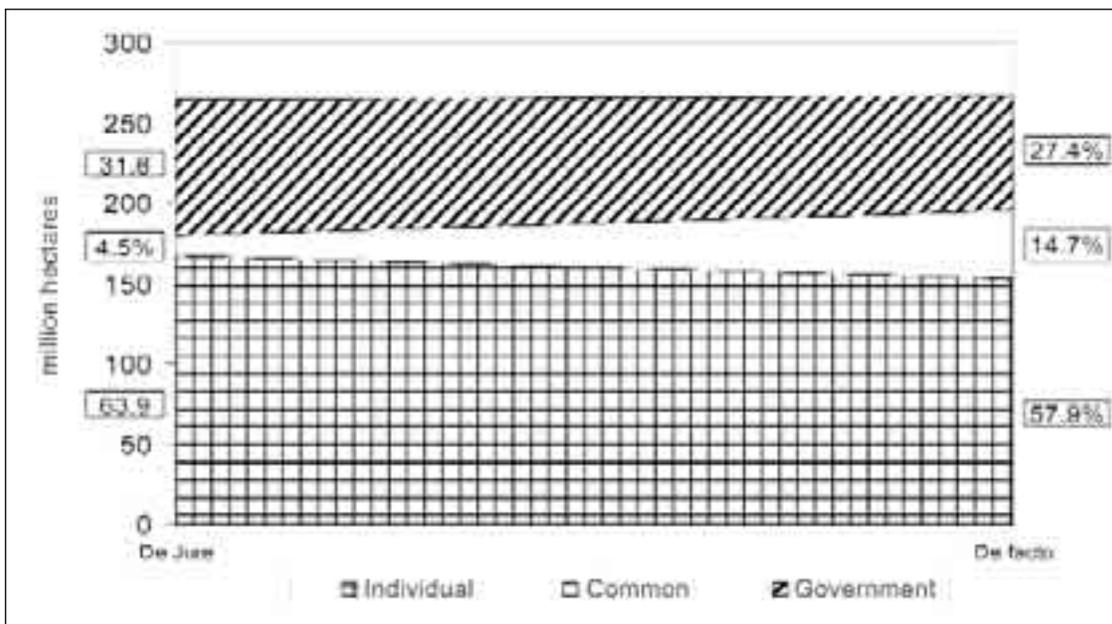
Figure 2: De jure vs. de facto tenure, total of all land use types

These charts demonstrate the complexity of dealing with land-use issues and the importance of understanding the differences in the various tenure systems in order to properly plan and manage the resources in question. Furthermore, tenure is not a static characteristic of land, and existing tenure is constantly challenged, modified, and recreated. As usage changes, the land's predominant users and even their nominal users may change. Thus tenure is a dynamic changing process with a number of societal actors and ultimately dependent on a societal consensus for its acceptance.

Broad definitions

In spite of the varying definitions of tenure and the plethora of registered land categories that stem from them, based on registered ownership and common usage patterns, four broad definitions of land category can be distinguished.

Private ownership – This can be defined as land predominantly owned by individuals, families, or institutions. It could be cultivated, fallow, or even non-arable and can include homesteads and river banks.

Community ownership – These are generally non-arable, often grazing, lands used by natural or revenue villages as common lands, e.g., shamlat in Pakistan or panchayat land registered or transferred to panchayat ownership in India. It could also include revenue generating or other government lands to which villages have recorded customary rights or purchased rights, e.g., Khacharia in Punjab.

Co-parcenary – These are lands (generally non-arable) owned by corporate groups or shareholders under some form of joint tenancy. It includes divided lands which are managed through joint decisions, e.g., joint ghasni, makbuza malkan, and others in Punjab, or undivided contiguous land units with registered individual owners or shareholders, e.g., mustarka malkan, private shamlat). This category also includes hamlet, village or revenue unit group lands with registered owners that exclude some members of the community, e.g., shamlat pati.

Government ownership – These include lands under the legal control of the government and administered by the forest or revenue departments. They can consist of non-arable revenue, barren, grazing, or partially forested areas and are used as commons by the surrounding communities. More often, they are classified as forest lands of various categories, for example protected, reserve, or national park.

Figure 3 distributes these categories on a scale ranging from private (individual) through common to government and uses these three roughly divided categories of nominal (registered) ownership to depict overlapping tenure. The division of property rights has been estimated using equal weights to the various characteristics of property: viz., exclusivity, transferability, alienability, and enforcement, and averaging in de facto usage rights.
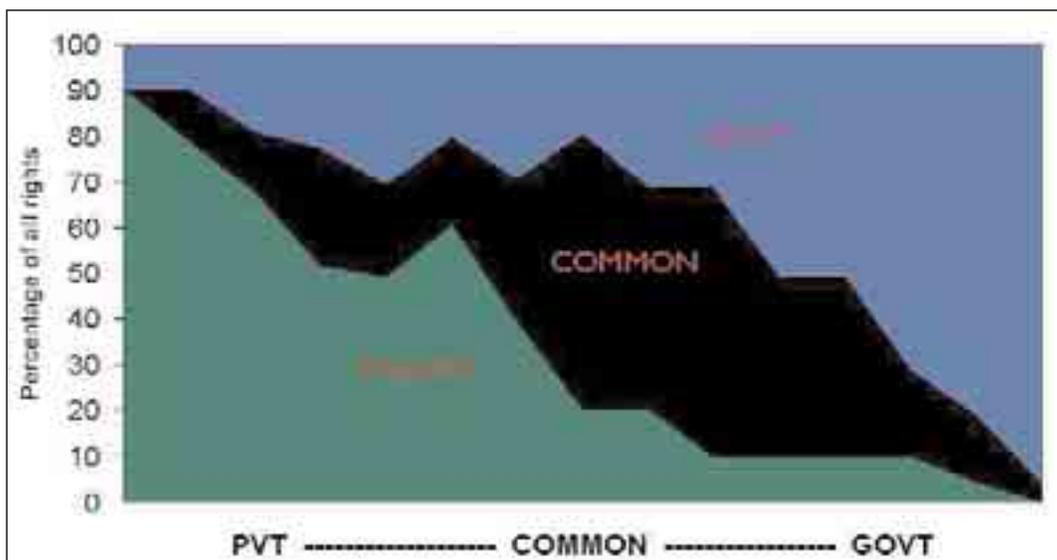
Figure 3: Overlapping tenure rights on different land types

Tenurial options

Keeping in mind these different tenure systems, three main options are usually considered for improving the management of common use resources: viz., privatisation, introducing stronger state control, and co-management.

The third option is of particular interest in that various community-based co-management options can be considered depending on various socioeconomic and ecological factors. The conservative route most often taken in the past was for the state to retain ownership of the land but issue use permits or tolerate the use of the resources by local communities allowing only token community participation. The second route was for the state to enter a joint decision-making and benefit-sharing arrangement with community committees while retaining ownership as is found with joint forest management (JFM) in India. The third route, and the one that is now gaining credence, was to transfer ownership or provide long-term leases of the land to community user groups, e.g., community forest user groups in Nepal, and the ban panchayat in India.

Resistance and trust in community management

There is still strong resistance from state agencies to transferring real ownership and management responsibilities to communities. Some of these are legitimate concerns, such as the danger of resources falling into the hands of elite members of the community, the potential abuse of rights and mismanagement of the resources, and the loss of benefits and revenue to the government and secondary (indirect) users.

Therefore, the starting point for champions of co-management is to build trust among decision-makers in the community's ability to shoulder the responsibilities. On the ground demonstration of actual successes, such as community forestry in Nepal, are perhaps the most convincing. Fears can also be allayed by putting mechanisms in place to ensure equitable benefits to legitimate owners and users, to comply with the prescripts of socially and environmentally viable management, and to honour the rights of and obligations to the members of the group. Supporting legislation and policies that are translated into multi-faceted programme support are critical and reinforce trust as well as management skills.

Processes in adopting viable co-management options

There are several conditions and steps that need to be taken in establishing functional and effective community-based natural resource management systems.

Defining community owners
Community grouping and primary ownership rights should be based on traditional user groups and not on administrative units. Nepal has devolved management of forests from panchayats to user groups at the local level based on lessons learned in the 1980s which showed that devolution to the panchayat level was not acceptable to the community of actual users. This identification of the primary community of owners and the inclusion of competing secondary users within the management regime is the single most important feature of successful community-based resource management.

Potential for scaling up
Co-management must be based on enabling the community of users to determine their own priorities for management, while ensuring that the basic subsistence needs of the poor and marginalised are being met. Communities sustain interest in the resource

when it also generates cash income for improving livelihood conditions by meeting the market demands for selected products for which the local conditions provide comparative advantages. The potential for scaling up is generally determined by how successful the approach is in meeting the needs of the members. In seizing the opportunities offered by community-based approaches, long-term consequences and mechanisms of sustaining the group and its access to the longer-term benefits, such as those from commercial timber production in community forestry, should be taken into account.

Agreement and management plan

The starting point is to verify and establish existing de jure and de facto rights and uses of all stakeholders to the natural resource under consideration. The rights and responsibilities should be clearly aligned to benefits and incentives and reflected in agreements among the stakeholders. A management plan that takes into account social, economic, and environmental considerations and embraces the blending of scientific and indigenous knowledge perspectives has a better chance of working. It should be remembered that such plans can change tenure and, therefore, care should be taken to ensure that the desired change is achieved. To this end, the agreement and plan document should normally clearly define the objectives, the indicators of success, the inputs and activities to be undertaken, the mechanisms of benefit distribution and access to resources mutual obligations and responsibilities, work schedule, and conflict resolution procedures.

Choice of technology

Just as plans can change tenure, so can technology. The technical choices being made can represent the differing interests of the various stakeholders and can easily compromise the need of one in favour of another. For example, managing forests for timber and using timber species for planting by the forestry department could result in the deprivation of fodder, fruits, medicines, and other minor forest products for local people and thereby result in the de facto loss of their use rights to the forest. However, if planting timber species is done with wide spacing, it would still allow the use of forests for grazing and other purposes.

Thus, the choice of technology should cover the whole spectrum, from the choice of technology for investments to the choice of technologies for management and marketing of products, and it should include environmental impact assessment methods. Cost is an important consideration and technology should not be used as an excuse to exclude the poor from participation. It is thus essential to get the varying interest groups to engage in negotiating a fair agreement and to provide platforms for putting their views.

Still, no single instrument provides the solution for common property resource management problems, and there is ample evidence of failure rates for methods that do not empower communities to learn from their own mistakes. The most promising solutions, therefore, would appear to lie in enabling communities to learn and start with their own ground realities. Accepting the fundamental fact of overlapping tenure while striving to reduce the ambiguities that undermine higher levels of sustainable investment requires careful negotiation to maintain a level playing field. The most important starting point for the removal of ambiguities is the recognition and rationalisation of existing de jure and de facto rights and thorough analysis of existing legislation on all categories of land. Effective common property resource management

must start from the premise of joint management, from the recognition that individuals, communities, and the state all have some legitimate claims in resource production.

Concluding thoughts

Tenure is a key factor influencing investment, sustainability, and equity in community-based natural resources. To the extent that the tenurial option is accepted by society as being a fair representation of their respective property rights, the chances of its being maintained in a productive state increases. In the case of forestry, tenure is multi-stakeholder, dynamic, and created though the interplay of policies, technology choices, and resource use. To address the demands and concerns of all the stakeholders adequately, operational planning is the key decision-making platform, since access and control over planning determines future tenure and outcomes.

In the case of other natural resources such as pastures and rangelands, land tenure is even more complicated than forests and, at this stage, much less studied and regulated. This represents a major research, policy, and programme gap, one that presents both problems and opportunities for governments and research and development organisations like the International Centre for Integrated Mountain Development (ICIMOD), the Regional Community Forestry Training Centre for Asia and the Pacific (RECOFTC), and the Centre for International Forestry Research (CIFOR). The starting point while tackling this issue would be to consider policy options based on an understanding of how tenure can change the sustainability of resources and address social equity concerns. Also to be considered is how technology choices, such as fencing, water holes, reseeding, and so on, can change tenure. Effective tenure should ensure the rights of the primary and secondary user communities and the legitimate concerns of the local and national governments, including a fair share of the revenue, the flexibility to adapt to changing market demands, and the sustainability of resources.

Leasehold Forestry: An Endeavour to Reduce Poverty

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Abstract
Nepal's forests, occupying almost 40% of the total area, represent key resources for facilitating land-based economic improvements in the country. At the same time, Nepal, with its hilly and fragile environment, cannot do without the environmental services provided by its forests. Thus, there is a tested, new concept which marries forest management with agricultural management. Degraded forest land is leased out to groups of the poorest people, securing them long-term land use rights, whereas ownership is vested in the government in order to meet the twin objectives of poverty alleviation and environmental amelioration. This concept has been successfully implemented for twelve years and has yielded positive results. While community forestry has been able to improve the health of forests and the local environment, it's suitability for tackling poverty alleviation was questionable. In view of this, leasehold forestry is seen to be a more poverty-focused approach to managing degraded forest lands and would complement the efforts made under the CF programme.

This paper, by analysing the current situation, tries to establish complementarities between community forestry and leasehold forestry so that greater numbers of poverty-stricken people can benefit than heretofore.

Introduction

Nepal, a small landlocked country, lies in the southern Himalayan region between $26^0 22'$ N and $30^0 27'$N and $80^0 4'$E and $88^0 12'$E. It is sandwiched between two giant countries: China to the north and India to the east, west, and south. About 83% of the terrain is hilly and mountainous, and only 17% of the area falls in the plains. The elevation above sea level ranges between 86m in the south to the highest peaks in the world including the 8,848m Mount Everest. Physiologically it can be divided into three main regions. The Terai or the plains – which is an area lying up to 900 masl. This area is the bread basket of Nepal. The hill region ranges between 900 and 3,000m; here forests and agricultural lands are mingled, mostly with many microclimatic regions, difficult rugged terrain, and rich biodiversity. The Himalayan region, ranging from 3,000 to 8,848m, is sparsely populated and characterised by high biodiversity with high-value, low-volume medicinal and aromatic plants.

By religion a Hindu country, Nepalese society is divided into four castes: Brahman, Kshatriya, Baishya, and Shudra, the latter being regarded as untouchable. Poverty is mostly suffered by the shudra who are socially stigmatised. There are three main categories of disadvantaged groups (women, untouchables, and ethnic groups), along with other poor from the higher castes. The government has recently adopted positive discrimination to create avenues for upliftment. Economically Nepal is one of the poorest countries in the world with an annual per capita income of around US$ 260. About 32% of the people live below the poverty line.

Policy initiatives

The forestry sector has been sympathetic towards the disadvantaged and poor. The first Forest Act (1961) had provisions for providing forest products such as har sangha (wood for agricultural implements) and ghar shangha (wood for making houses) to rural communities. Similarly, persons affected by natural calamities were helped by being given forest products to re-construct their houses at 10% of the royalty rate. In 1978 the government decided to grant tenurial rights to the forests to the communities, whereby the communities were able to protect, manage, and use the forests sustainably.

The next step in the development of community-based forest management came through the Master Plan for the Forestry Sector in 1989. The Master Plan states that the important goal is to encourage communities to be increasingly more self-reliant and to mobilise the vast manpower and other resources of rural communities for forest development and management to meet their own needs. Actually, at that time meeting subsistence needs in forest products was the main goal: the plan did not envisage the commercial value of community forests. It again stated that the panchayat (the local unit to which the forests were to be handed over to at that time) were too big a unit to be handed over to and that a 'user group concept' should be fostered. It went on to propose a new forestry legislation that facilitated the introduction of socially and economically sustainable community forests wherein the decision-making and benefit-sharing mechanisms would be incorporated, including the interest of real primary users such as women and wood-cutters. It did not directly state to positively discriminate on behalf of the disadvantaged and poor but in a way it opened up an avenue through which the voices of the poor and disadvantaged groups could be heard. In the Master Plan leasehold forests came under the heading of 'National and Leasehold forests' which received second priority after community forestry and private forestry. It states that national production forests should be established and managed, e.g., in the Bhabar Terai (plains), to supply wood to urban and wood deficit areas. Forest lands are leased to industries for the production of raw materials. Until then, leasehold forests were envisaged only as sites for industrial plantation, not for poverty alleviation and not through a group approach.

From the Eighth Five-Year Plan (1992) onwards, national priority shifted towards poverty alleviation. Services of all sectors focused on poverty reduction. With that prioritisation, the forestry sector also adopted a poverty alleviation approach, thus emerged the 'Hills Leasehold Forest and Forage Development Project' which had the twin objectives of reducing poverty and ameliorating the environment. The forest area was given on lease for forty years, renewable for another forty years, to the poorest of the poor to work on improving the area by planting forage and multipurpose tree species. The best part was that all the benefit accrued directly to the lessee households.

The Forest Act (1993) did not include the leasing out of forest area to the poor, but it made a provision for leasing out to groups as well and stated that the rent would be as per given in the Forest Regulations.

The Forest Regulations (1995) came out strongly with a concept of leasing out forests to disadvantaged groups as a special provision. They state that the government can hand over leasehold forest by preparing a project for people living below the poverty line. The fee for the leasehold was made exempt for project beneficiaries.

The Agricultural Perspective Plan (1995) came after the launching of the 'Hills Leasehold Forest and Forage Development Project'; it has a stated commitment on leasehold forestry for the poor.

The Forest Policy 2000 had community-based leasehold forestry as one of the main components.

In the Tenth Five Year Plan (2002-2007), with its commitment to poverty alleviation, pro-poor leasehold forests received a strong emphasis, with leasehold forestry categorised as 'the First Priority Project'. Moreover, it gave directives to include the concept of leasehold forest in community forests so that the poor receive benefits to help bring them out of poverty.

The Leasehold Forest Policy (2002) has a strong inclination towards pro-poor leasehold forestry. It identified certain problems in relation to granting leases to poor households and came up with the following solutions.

- Registering the leasehold groups in the Small Farmers' Development Project and the granting of leasehold certificates by the Ministry of Forests and Soil Conservation (present practice) is a cumbersome process; therefore, the District Forest Officer should be authorised to hand over the leasehold forests, approve the operational plans, renew the leasing licenses, monitor implementation, and so on.
- The identification of communities living below the poverty line should be practical, obvious, and transparent, so the National Planning Commission and other related agencies should be consulted.

Providing leases alone cannot generate sufficient employment and income to the leaseholders. Thus, leasehold forestry for poverty alleviation should be integrated into poverty alleviation programmes; however, the Leasehold Forestry Policy (2002) has yet to be integrated into the Forest Act and Forest Regulations and to materialise in the field.

Background to Leasehold Forestry

Introduction of measures recognising the usufruct rights of local people over forest resources started in the late 1970s, wherein the communities were given rights to protect, manage, and use the forest resources of Nepal. Generally two types of participatory public forest management modes were recognised. 1) **Community forest** – local communities were given management and use rights according to their proximity to the forests, their needs, and their management capacities. Initially this kind of forest was meant to provide local people with the forest products they needed. 2) **Religious forest** – This was a kind of passive forest management in which the religious group could ask for a patch of forest exclusively for religious purposes. It was meant to provide forest products for religious purposes only and not for commercial purposes, even if the products were in surplus.

Public forest management has undergone a lot of changes and amendments since its inception. Community forests have started producing various kinds of products, and selling takes place outside the group as well. Productivity has increased, not only making it economically viable but providing surplus beyond local needs.

Advent of leasehold forest as a pro-poor activity

One more category has been introduced since the 1990s, explicitly for poverty reduction among the poorest groups. A patch of degraded forest is handed over to a small group of poor people and is managed in such a way that the benefit accrues directly to the households involved. The government intervention here is to empower the people against social exclusion, help them create an institution of their own, and manage the patch of forest to increase its productivity. The earliest income can be realised through the silvopastoral method of management, which is also in many ways a familiar rural concept. The government takes no fee for leasing the forest, and this kind of forest is handed over for up to forty years initially, renewable for another forty years.

Another kind of leasehold forest is envisaged to increase the productivity of degraded forests and to provide materials for forest-based industries, ecotourism, agroforestry, and for domestication of wildlife. This type of forest is to be handed over to institutions only on payment of a fee to the government for the use of the land. Out of these two types of forest, community forest has the legal priority.

Recently another kind of participatory forest management was introduced into the productive forests of the Terai: collaborative forest management. It tries to accommodate the needs of distant users as well and the revenue is shared between the central government, local government, and user groups.

Institutionalisation of pro-poor leasehold forest

Leasehold forestry, which was institutionalised through the Hills Leasehold Forestry and Forage Development Project funded by the International Fund for Agriculture Development (IFAD), started in 1992. The concept of leasehold forestry for the poor came into practice only after the introduction of the project in 1991. The project has two objectives: 1) to alleviate poverty in poor rural households, and 2) to rehabilitate degraded forests in the hills. The two eligibility criteria to be a candidate for leasehold forestry are 1) the farm family should have less than 0.5 ha of land, 2) the per capita income of the farm family must be less than NRs 3,035 per year (1996/97 base year; in 2002 NRs 6,100, approximately equal to US$78). After meeting these eligibility criteria, the households will take part in a participatory rural appraisal process which divides them into poor, very poor, and ultra poor categories. Household selection commences from the ultra poor upwards, according to the availability of forest land.

The leasehold forestry process

Initially a patch of degraded forest (below 2000 masl) land is identified and, with the consensus of the local people, up to 10 households of the poorest of the poor living in the vicinity of the forest are identified. Community mobilisation techniques are used to raise the awareness of prospective leasehold groups about leasing processes and benefits. When they are ready, they form a leasehold group. Then the divisional forest officer publishes a 35-day notification to find out whether any of the communities are interested in establishing a community forest in the same forest area. If there are no objections then the leasehold group is registered at the District Forest Office.

A working plan for the forest area is made (usually for five years initially) with the consensus of the participating members and the district livestock services' office. After this, the area is handed over for 40 years as leasehold forest, but as these participants live below the poverty line, they are not obliged to pay the leasehold fee. The operational

plan is renewed every five years. The lessee starts by protecting the land leased from grazing and forest fires. With technical and other support from the district livestock services office and forestry organisations, forage and forestry development is undertaken with short-term and multipurpose species; cereal crops may not be cultivated on leasehold land. Perennial forage farming with livestock-keeping is very popular in leasehold forestry, as it is based on traditional knowledge and skills and provides tangible benefits quite swiftly.

Training is given on land improvement, gender equity, income-generating activities, livestock rearing, nursery management, forest management, horticulture, and so on to equip people with the skills needed. Extension activities like study tours are carried out so that the new leaseholders can learn from other leasehold farmers. Seeds of improved grasses and saplings of fruits and herbs are distributed. People come to realise that the way out of the poverty trap is in their own hands. They are encouraged to participate in a savings' credit system of their own, so that the needy can receive loans from their own fund as and when required. They are constantly monitored by the project personnel and group promoters. Later on they are encouraged to become part of a federation of inter groups and cooperatives of their own – with 10 groups participating in one – to look after their broader interests.

Stages in the leasing process

Group formation stage – The group formation stage basically consists of site identification, awareness-raising, community consensus building, identification of poor households, group formation, application for the identified leasehold forest, publication of the 35-day notice, operational plan preparation, leasehold forest demarcation, and issuance of lease certificates.

Land development stage – Land development starts with the cessation of all grazing on the leasehold land, followed by enrichment planting with grasses and or leguminous ground cover species and tree species (fruit trees included). Gradually, the natural vegetation regenerates, recreating a multi-storied productive forest. Land development training is provided to all new leasehold farmers (both husband and wife). This stage lasts from five to ten years, but it overlaps with both the group formation stage (site protection usually starts before the leasehold forest is formally handed over), and the management and utilisation stage (utilisation usually starts while development is taking place).

Leasehold management and utilisation stage – The land starts producing fodder forage, fuelwood, poles, small timber, and even fruits, medicinal plants, bamboo, and so on, depending upon the site and land development.

Issues and opportunities

In an agrarian economy where 82% of the people depend on agriculture, the per capita available arable land decreased from 0.6 ha in 1954 to 0.15 ha in 1998 and is still shrinking. Distribution patterns are highly skewed as the top 5% of households own 40% of the land, whereas the bottom 60% own only 20% of the land (Shrestha 2004). Through the Agricultural Perspective Plan and other policies, the government has made it clear that there is no possibility of diversion from the agrarian economy to any other in the near future. Only half of all households were food secure in 1997 (NASC 1998, cited in Shrestha 2004).

At present, forest coverage is 39.6% nationally and, as per the forest policy, the government is determined to keep it at around 40% (and is striving to increase it to slightly more than it is at present). Increasing the productivity per unit area is quite difficult because of remoteness and other factors; expansion of the area has reached its limits. Poverty is rampant. About 30% of the population lives below the poverty line, and in the midhills the proportion is higher.

Community forestry (CF) is the mainstream forest management mode in the midhills of Nepal but it is clear that, with the present set up, it cannot cater to the poverty-stricken populace at large. On the other hand, almost 23% of the total forest area has been handed over as CF and around one third of the total population is engaged in the CF process.

In the whole of Nepal, around 13,538 community forests have been handed over to user groups. These forests cover a total of over 1.1 million ha (the area is equivalent to about 23% of the total forest and shrub area of Nepal). The community forestry user groups have 1.5 million household members with an average of 0.77 ha per household. The participants in community forestry groups account for about one third (approximately 30% of households in the country) of the total population of Nepal (DoF 2004).

The participation of the poor in CF is seriously limited. Their voices are not usually heard and the local elite tend to dominate the community forest executive committees. Under CF, more benefits accrue to better-off households that are in a position to influence decision-making. Poor households cannot afford timber even at the subsidised prices offered by the CF user group committee (HLFFDP 2004). According to a recent study, only about three per cent of the benefits accrued from CF has been spent on the core poor (Kanel 2004).

Achievements to date of pro-poor leasehold forestry: the Hills Leasehold Forestry and Forage Development Project, the Western Upland Poverty Alleviation Project, the Biodiversity Sector Programme for the Siwaliks and Terai, and the Livelihoods and Forestry Programme are involved with formation of leasehold groups and with their development. Altogether 2,213 groups have been formed throughout Nepal with 16,223 households, and 9,798 ha of forest have been handed over to the groups of poor families.

The Tenth Five-year Plan (2002-2007), or Poverty Reduction Strategy Plan (PRSP-2002), is the government's main medium-term strategic planning document. Poverty alleviation is the main objective of the plan, which envisages reducing the overall incidence of poverty from 38 to 30% by 2006/07. The forestry sector objective in the 10th plan includes an increase in livelihood opportunities for people living below the poverty line through the leasehold forestry programme.

Focus should be given to the economic, social, and human capacity development of poor families through leasehold forestry. In addition, the concept of leasehold forestry for the poor should also be incorporated into community forestry to benefit the rural poor (HMGN 2002)

Poverty reduction should be a household management strategy. The poor live in their own microcosm, thus poverty has to be tackled at the micro-level, not at macro-level. Poverty is a multi-dimensional and multi-level phenomenon, and it is always difficult to

disentangle the causes and results. Cyclical reinforcement of factors continues to complicate the development of appropriate strategies to overcome poverty. However, it is not an immutable condition, public policy and action can reduce poverty and sustained progress can eventually eliminate it. Since the 1960s, rural development and basic needs' approaches have not had the effect desired. The mixed results of conventional poverty-reduction strategies point out that the **strategies employed to combat poverty have failed to take into account the poverty process itself by uncovering the multi-dimensional causes and factors of poverty.** Earlier, accelerating economic growth through investing in projects with high returns was thought to be the cornerstone of poverty-reduction strategies, and it was believed that the inevitable result of economic growth is poverty reduction. Projects were conceived to transfer technology, provide subsidies, and create infrastructure, and it was hoped that poverty reduction would follow. Economic growth alone cannot reduce poverty, although it is a necessary condition (Sadeque 2000).

An alternative vision of development that centres on enlarging people's choices and capabilities, and provides them with the opportunity to participate in decisions affecting their lives, is through a system of governance that promotes and supports citizens in articulating their interests, exercising their rights, meeting their obligations, and mediating their differences. This is essentially good governance, governance that promotes participatory decision-making and transparency of action in all spheres of life. Local-level governance, through local institutions, enables and empowers people to participate more directly in making decisions, is in a position to produce quick responses to people's needs and priorities, and is one of the critical ingredients for promoting genuine ownership by the people. Decentralisation and people's participation are necessary preconditions of good governance, but without empowering the poor through pro-poor governance and supporting the poor to organise and build their own organisations, reforms in governance will be ineffective and fail to produce the results desired. The following strategies can create supportive social forces for the good governance vital for poverty reduction.

The poor must be encouraged to build their own organisations and support from the state and civil society as a whole is essential to make this happen. This is the best antidote to powerlessness**.** This is exactly the local user group concept that leasehold forestry has worked to achieve. Small group composition, like mindedness, and similar difficulties are made to achieve what the larger populace virtually cannot achieve.

Effective targeting is the next step in pro-poor governance. When the poor have their own organisation, the institutional incentives in place can only then become accessible and useful to the poor. Instead of assuming the poor to be passive beneficiaries, it is necessary to reorient our thinking to consider focusing resources on the poor directly; and this includes helping them build their own organisations and allowing them a say in allocation of resources and service delivery mechanisms (Sadeque 2000).

The most notable progress in poverty analysis and reduction strategies in the past has been in the realisation of the value of good governance and socio-institutional arenas in ensuring the right type of enabling environment for poverty reduction – along with the understanding of comprehensive concepts, such as livelihood security, that go beyond employment generation. A complete reorientation in approach is essential in order to look at the institutional dimensions that create poverty and perhaps hold the key to improving the capabilities of the poor to hold back the forces of poverty and reverse the trend. This approach can only be successful if we focus on supporting the

institutional strengths of communities that can ensure participatory governance and wiser use in accessing available resources, thus reducing poverty by ensuring long-term livelihood security.

The rural poor have considerable potential and capacity to contribute to the national economy, as well as improving their own standards of living, if given the opportunity. They can manage forest rehabilitation, infrastructural development, and savings mobilisation. They are 'bankable' and 'trainable'.

It is essential that a framework for institutional analysis is understood and applied to bring about the effects sought from projects, policy design, and any other interventions. Similarly, the nature and quality of governance largely determine the results of development efforts and the success of poverty-reduction strategies, irrespective of the quality of design and amount of investment. Despite their importance in the past, both the institutional and governance dimensions have not received the attention they deserve; and this is mostly due to a lack of understanding about such supposedly abstract constructs and failure to comprehend their importance in service delivery and management.

Going beyond simple income deprivation, social exclusion is a state of poverty in which individuals cannot access the living conditions that would enable them to satisfy both their essential needs and participate in the development of the society to which they belong. Therefore, when people cannot achieve their potential through upgrading their capabilities or because of deliberate and structural constraints, such as caste, ethnicity, religious orientation, or other social barriers, such an exclusionary process remains the major obstacle to poverty reduction. Hence, participatory development, empowerment of local communities, and devolution of authority become nullified if social exclusion holds sway and social inclusion principles are not deliberately fostered. Social exclusion in various arenas is an important factor perpetuating poverty. There should be recognition of a comprehensive development framework that affirms the importance of institutions, governance, and social capital as being no less critical than physical and financial capital in the process of change from despair and deprivation to development and human well-being (Sadeque 2000).

With 40% of the land under forest, the forestry sector has a great responsibility to reduce poverty. It can neither allow reduction in the forest area nor shirk from the main responsibility of poverty reduction. This is where the leasehold forestry concept comes into play, as it has the capacity to ameliorate the environment and to reduce poverty at the same time without jeopardising the function of either.

The leasehold forestry for the poor programme facilitates the community forest management process by providing additional resources to the neediest people who are highly dependent on daily forest services (Yadav and Dhakal 2000).

Outcomes

The provision of secured access to degraded forest land, combined with assistance in terms of training and inputs, has increased the availability of animal feed and fuelwood. The time consuming process of fodder and fuelwood collection, preconceived as women's work, becomes less burdensome when these items are made easily accessible, giving women more time. The project has reduced the time for this task by 2.5 hours per day per participant household on average, thus reducing drudgery. This,

in turn, has allowed women to undertake more socially and economically productive activities, including learning and income-generating activities. As a result, household incomes have increased, as well as women's education and social status.

In leasehold forestry, there is a remarkable shift towards sharing decision-making. Before the leasehold groups were formed, only 10% of the women could decide for themselves, while 30% made joint decisions, and 60% depended on a man. Five years later, 25% of women could decide for themselves, while 55% made joint decisions, and only 20% depended on a man(Douglas and Cameron 2000; Ghimire 2000 cited in Ohler 2000).

Increased fodder availability has made it easier to convert from free grazing to stall feeding, reducing the pressure on forests and vegetation, and ultimately leading to improved environmental conditions. Stall-feeding has also increased the availability of manure, which in turn helps maintain or improve soil fertility on private land, leading to increased food production and food security.

Access to credit (formal and informal) has encouraged poor households to change the composition of their livestock from local to improved animals and from local cows (which are less productive) to buffaloes. The more productive animals make it more rewarding to convert to stall feeding. As a result, more livestock products are available leading to improved nutritional status and food security as well as increased incomes.

Overall household food security steadily increased, the household survey found a 16% increase in person months of food self sufficiency in leasehold forestry households between 1996 and 1999, compared to a 4% decrease in food self-sufficiency in similar, but non-project, households over the same period.

G. P. Kafley

ICIMOD Partnership Platforms 2/06 (S)

Women planting asparagus, which provides an immediate source of income, on leasehold forest land

Improvement in livelihood assets

Generally it has been seen that all livelihood assets have been improved with the advent of leasehold forestry (IFAD 2002).

Enhancement in human capital – This includes increase in asset ownership (land, livestock), increase in food security, improvement in the quality of food, children able to go to school, better health, time saved in collecting fodder and firewood, increase in recreation time for women, and increase in vision and exposure.

Increase in financial capital – This covers increase in income by selling stylo seed (NRs 400/kg), buffalo milk (NRs 20/litre), and seed of molasses' grass; greater ability to pay loans; increase in number of existing livestock; conversion of existing livestock into more productive animals; and grass and tree production.

Enhancement of social capital – This encompasses a rise in literacy and empowerment of women, increase in the confidence of women participants, increase in the habit of saving resulting in higher levels of savings by group members as a tool for coping with vulnerability, group cohesion, bonding, and formation of cooperatives.

Improvement of physical assets – This embraces improvement in the quality of life, e.g., better housing conditions by replacing thatched roofs with tin roofs and increases in livestock numbers.

Improvement of natural capital – This covers increases in greenery, forage, and trees; and increases in the productivity of forestland and in biodiversity.

Strengths, weaknesses, opportunities and threats (SWOT) of the leasehold forestry programme

This paper was prepared by reviewing the literature, mostly drawing upon secondary information. In addition, personal communications with user group members and personal experiences are included. The results of the SWOT analysis for the leasehold forestry programme are shown in the box.

How to go ahead?

Forestry should be people-focused. The local people should be given the right to choose modes of forest management according to their needs, so that they derive benefits without harming the environment. Let's think holistically. None can deny that something drastic has to be done in community forestry to make the resource more accessible to the poor.

In areas hitherto not handed over as community forest, the villages should be divided into areas with (a) sufficient forest and (b) insufficient forest. The communities should be subjected to a well-being ranking process. The lowest level of the household in well-being ranking should be matched with the available forest area. In the first situation with sufficient forest, isolated patches of forest area below 10 ha should be handed over as leasehold forest, It should start with the ultra-poor households and move upwards in the ranking level to the poorest and the poor, up to the available area that can be accommodated. Then if some of the forest area is degraded, part of it should be handed over as leasehold forest. If the area does not have degraded forest, sufficient good forest areas can be developed into leasehold forest with silvopastoral systems.

Results of SWOT analysis for leasehold forestry

Strengths	*Weaknesses*
• The groups are very small (up to 10 households), individual or quasi - individual ownership and decision - making processes are prevalent which makes the whole process easy, simple, and effective.	• Due to the small numbers per group, they are vulnerable to external interference.
• The small groups, make it easy to monitor and train, and implement activities.	• Due to the small number, sustainability is questionable.
• It is a bold step which acts against the status quo, against social exclusion, and in favour of creating locally-based institutions. Leasehold forestry is involved in redistribution of assets in favour of the poor, and challenges the status quo.	• It is very difficult to accommodate all the households in a community because forest land is limited , and the ultra-poor are numerous. • The households and groups are scattered, thus it seems a costly intervention o n a per unit benefit basis. • Sectoral policy is still in favour of CF. • It is not an 'indigenous system of forest management', thus it has to start from scratch.
• The savings and credit system acts as a fulcrum of s elf-reliance and coping against vulnerability for the ultra poor.	• Poverty is a dynamic process, but the process considers it to be a constant – handing over an area to poor households for forty years when the dynamism of poverty may alter the socioeconomic structure is perhaps a serious drawback.
• Constant and continuous monitoring is possible through locally-based women who are community mobilisers.	• It is assumed that there will be an active and functioning leasehold forestry user group for forty years. Yet the groups formed till now consist of less than ten households, which are on average less educated and have a lower social standing than the community as a whole. It is difficult for such small groups with such limited human resources to form and maintain functional organisations that last so long. Forming much larger leasehold groups with many more households would dilute some of the reasons behind the effectiveness of the small leasehold groups in improving livelihoods and the environment, particularly the indi vidual or quasi -individual feelings of ownership and decision -making over the use of the resource.
• National policy (10 th Plan) is supportive of poverty -reduction activities.	
• It is an integrated and participatory approach.	
• Income goes directly to the households, thus the y have more incentive to be involved in th e process.	• Poor households have problems because leasehold plots with degraded forest do not instantly become productive and support livelihoods. The land needs time and hard work to become productive and there is a gestation period before grass/trees become productive.
• Income poverty is reduced over time as a result of the sale of forest products and milk and the gradual increase in the ownership of assets such as buffaloes and goats. Reduction in human poverty is facilitated by the social and technical suppo rt provided by the different agencies, with a favourable impact over time on the confidence, capacity, quality of life, and social capital.	• The limited outreach of the bank and emphasis on collateral is another source of exclusion. Saving as a regular habit is uncommon among food -deficit households. The hard core poor do not normally access investment funds because they find it risky and have no collateral against which to borrow. Although a few of the moderate poor borrow from banks, most poor people have no access to formal credit and do not have the courage to borrow. Borrowing from informal sources implies higher interest rates and difficult conditions for repayment.

Cont.

Opportunities	*Threats*

Opportunities

- In order to reduce vulnerabilities, leasehold forestry emphasises savings by the participants, reliance on multiple sources of livelihood, and a combination of b oth immediate (credit), medium-term (grass, non-timber forest products , vegetables), and long-term benefits (timber).

- Balancing the act of environmental amelioration and increasing the benefit at household level seems to work through pr o-poor leasehold forestry where as the poor are assigned a package area for production and at the same time they are asked to ameliorate the environment through simple land management practices.

- Intergroup, cooperative , and federation formation 'make up' for small groups by increasing the 'total' size.

- Pro-poor leasehold forestry is pastoral-based and supplies of meat are always short, so there is no dearth of markets.

- Leasehold forestry should not be restricted to degraded forests; the silvopastoral management system has still to gain recogniti on. Rich forests (thus with rich fertility) should also be handed over to poor communities – even with thinning out of forests. Around 30% crown cover plus ground cover with grasses (to be developed with leasehold intervention) would provide better protection against soil erosion (better than forests managed with timber only). Timber management type operational plans are prepared and implemented despite the need of local people being grasses and fuelwood. While looking at the socioeconomic data collected in Part 1 of the community forest operational plan process, the main forest products in demand are fuelwood, fodder, and leaf litter, thus there is a great opportunity to integrate community forestry with leasehold forestry.

Threats

- The policy and legal fr ameworks for leasehold forestry are still insufficient.

- Under the current regulatory framework, community forestry has priority over leasehold forestry. As a result, community consensus is required for the handing over of leasehold forests to the poor and not vice versa.

- The Forest Act and Regulations have yet to recognise community -based leasehold groups as independent autonomous bodies.

- An economic feasibility report has to be produced before the management plan is approved, which is cumbersome work fo r the leasehold group.

- There is no provision for leaseholders to inflict punishment against any violations. Hi s Majesty's Government of Nepal becomes the plaintiff in all cases under the Forest Act; and there are no shortcut methods. In the same way, ther e is nothing mentioned about punishment in the Forest Act when products of the leasehold forest are illegally cut down or stolen.

- The right to the trees on the plot at the time of handover remains with the government, but the policy in 2002 envisaged some part (still undecided) to be given to the leasehold forestry groups as compensation for their protection wor k. The second amendment to the F orest Regulations (2002) has made a provision to do away with the official notification of 35 days to the communiti es around in order to see if a demand for community forest remains or not, or for institutional and industrial leasehold forests. The judgment about whether the area is appropriate for community forestry not has been delegated to the district forest office which, by appropriating areas for such endeavours (institutional and industrial leasehold) renders them inappropriate for community forest . The implication of this policy may put the industrial and institutional lease in front and push the pro -poor leasehold in to a corner.

- The outlook of other groups (development partners) towards leasehold forestry groups and whether they recognise leasehold forestry as a n entry point could be problem. H owever, these groups may be open to procurement of other services.

- Do the village and district development committees (VDCs/DDCs), which are local government bodies, recognise the leasehold forestry concept? How much do they support it in financial terms?

Where the forest is not sufficient, it is better to hand over the forest areas to community forests as everyone has a stake in them and everyone should have a share. To decide whether the community has sufficient forests or not, a rule of thumb of 0.25-0.5 ha per household can be established, depending upon the productivity of the area. This process would do away with the cumbersome process of notification and asking the communities what they need, and, at the same time, it would finish once and for all the priority of one mode of management over another.

In areas where the forest has already been handed over as community forest, the process should commence with degraded and open areas, if they are available for leasehold forestry, and then be applied to community forest; the inclusion of the households should have the same order as above. In areas where there are plenty of forests but not open areas, we should go into the leasehold forestry concept – not passively but actively applying the silvopastoral system – meaning that we should open up densely forested areas to make room for more opportunities and for planting forage species below these forests. Moreover, it should be mandatory for a fixed percentage of the benefits accrued from community forestry to be allocated to poverty alleviation.

After completing the well-being ranking, every line agency should be requested to recognise it as an entry point for making the Poverty Reduction Strategy Paper goal of poverty reduction possible. Poverty reduction should be regarded as a package deal; leasehold forestry should even be applied on private and communal lands where appropriate. The concept of leasehold forestry has been implemented on encroached land in the Terai, flood plains, common lands, and areas below high tension electricity transmission lines.

Vegetables and fruit trees should be encouraged on private lands rather than on common lands.

The money accrued by selling trees at the time of handover should remain with the poorest members in the cooperatives so that misappropriation and/or mismanagement of the fund can be controlled and minimised. There is a provision for diverting International Fund for Agricultural Development (IFAD) loan money disbursed for procuring goats into cooperative grants, why not the local resources? If we recognise the silvopastoral system as one of the mainstream systems (which most of the communities want) for the management of forests in the midhills, the financial sustainability of leasehold forestry cooperatives would be greatly enhanced. Harvesting trees and implementation as a silvopastoral system will generate a lot of forest products, and this could make cooperatives, micro-finance, and vulnerability coping mechanisms active and viable.

Conclusions and recommendations

1. Development of hill forests either as CF or leasehold forestry should not be guided by the law. It should depend on the situation of the site and availability of forestland and resources. Forest products fulfil many basic needs of villagers, and as long as they are just sufficient or insufficient to fulfil basic needs they should be managed as CF. At the same time, forest resources are renewable natural resources, they have a potential for alleviating poverty, which is the main thrust of the present government. Rather than managing forests for financial benefit through timber management targeted at distant urban centres, the poverty alleviation focus should become prominent. The tested and proved poverty alleviation model in forest

management is leasehold forestry. Thus, leasehold forestry should be introduced after keeping part of the forest area to fulfil basic needs.

2. Leasehold forestry should be considered as one of the most successful modes of poverty alleviation, since it has all the ingredients of a 'neo-poverty alleviation model' as follows.

   •   Social inclusion (inclusion of poor, disadvantaged and ethnic groups)
   •   An institutional structure owned by the poor themselves
   •   Focused targeting
   •   Benefit directly accruing to the households rather than relying on the (failed) trickle-down effect
   •   Increased productivity due to diversified income-generating activities
   •   Building on the indigenous knowledge of the villagers through a silvopastoral base and livestock farming
   •   Self-employment generation
   •   Quasi-individual ownership and participatory decision-making processes
   •   Active participation of lessees helping themselves to come out of poverty rather than waiting as passive beneficiaries.
   •   Directly focusing resources on the poor
   •   Vulnerability coping mechanisms engrained in the process through the savings and credit system

3. Leasehold forestry not only tries to reduce income poverty but also human poverty by positive discrimination and technical support.

4. Subsistence-level households find it hard to participate in a production model when the gestation period is long. Degraded forests do not yield instant products to support livelihoods. Thus, the government has to come forward to compensate for the resumption of productivity and for ameliorating the environment. In the same context, the benefit accrued from forest products during active silvopastoral management should remain with the cooperatives for compensation for the 'good work' done. Similarly, the ownership of the initial trees at the time of handover should also be channelled to the cooperatives.

5. In the aforesaid surplus type of CF areas, leasehold forestry concepts should also be introduced so that the populace already involved, accounting for almost one third of the total population, are not left out of the poverty alleviation process. In the mean time, 25% of the total benefit accrued from CF should be set aside as the initial inputs for poverty alleviation.

6. The forest area alone cannot accommodate all the poor, thus the non-cultivated inclusions in the hills – 705,000 ha (LRMP 1986 cited by Yadav and Dhakal 2000) – should be brought under active leasehold forestry management.

7. In the Terai, there are many forest areas that have been encroached upon where it is neither possible to evacuate encroachers nor manage the areas as production forests: such areas plus river-bank areas can be managed successfully by leasehold forestry.

8. As the Poverty Reduction Strategy Paper has only one goal of poverty alleviation, all line agencies should be encouraged to take into account well-being ranking as an entry point and focus should be given to the same target group for synergy.

9. For long-term sustainability, all the leasehold groups should be become part of one federation, cooperating at local, district, and national levels. This federation or cooperative will plead, advocate, and act in favour of small groups, thus prevailing against the 'weakness of small numbers'. Here, even the sub-groups of poor households in community forestry can be included in the intermediate groups.

10. Policies should be targeted for the benefit of weaker sections of society, thus amendments to the Forest Act against the aforementioned 'threats' should be made.

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Management of Guzara Forests; Policies and Their Implications in Hazara Division, North-West Frontier Province, Pakistan

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Abstract

The management of Guzara forests in the Hazara Division of the North-West Frontier Province (NWFP) of Pakistan is carried out through a variety of ownership arrangements. Legally the forests are broadly divided between state (reserved) and private (Guzara) forests. The deeply dissected land-tenure system and the ongoing conflicts between the government and forest owners and users have led to the drastic degradation of the resource. Since 1947, the government has enacted a series of forest policies to manage the meagre forest resources of the country, but none of these polices has been effectively implemented on the ground. Moreover most of the policies were aimed at the generation of revenue from the forests and little attention was given to environmental aspects and rural livelihoods. They were prepared through a top-down approach and community participation was not considered essential in policy formulation. Subsequently, these policies failed to achieve their objectives. Though forest legislation limits the rights of local people in the forests, the majority of them still have access to forest resources in the area. They fulfil all their requirements from these forests, but contribute nothing to the protection and development of the resource. It is feared that if nothing is done to check this process, these forests will soon disappear. The study argues for the introduction of a participatory forest management system and identifies options for and approaches to the sustainable development of the resource and improvement of rural livelihoods in the area.

Introduction

The Hindu Kush-Himalayas are home to watershed systems and natural resources providing life support not only to mountain communities but also to those in the plains. Forests, the most important of these resources, are a versatile and renewable natural resource and provide a wide range of economic, social, environmental, and cultural benefits and services. Since time immemorial, mountain people have depended on forests for various products to fulfil their basic needs for resources such as fuelwood, fodder, leaf litter, poles, timber, fruit, and medicinal plants and to provide other services that are essential inputs into the farming system. The forests also protect the natural resource base for growing agricultural crops and protect the upland watersheds against erosion, thus regulating water flow in the downstream areas.

Pakistan is a forest-poor country. The total area of Pakistan is 87.98 million ha out of which only 4.72 million ha are under forest cover. Thus the total forest cover (5.3%) is very low when compared to other countries in the region such as Malaysia 65.5%, Sri Lanka 42.4%, India 23.7%, China 17.7 %, and Bangladesh 15.3%. The per capita forest area is a mere 0.033 ha compared to the world average of 1 ha. The primary reason for the meagre forest area is that most of the land area (70-80%) of Pakistan falls in arid or semi-arid zones where precipitation is too low to support tree growth (Shah and Saliheen 2003). Though forest resources are meagre, they play an important

role in Pakistan's economy by protecting the upland watersheds, employing half a million people, and providing 3.5 million cubic feet of wood and one third of the nation's energy needs (Govt. of Pakistan 2002). Most of the country's forests are found in the northern part of the country (40% in the North West Frontier Province and 15.7% in the Northern Areas). The forests of the North West Frontier Province (NWFP) are distributed over the Himalayas in Hazara Division and the Hindu-Kush in Malakand Division (Ahmed and Mahmood 1998; Poffenberger 2000; Sulehri 2002).

Hazara division in NWFP is a mosaic of ethnic, socioeconomic, and biotic diversities where forests are held under a variety of ownership arrangements. These are broadly divided between state and private forests. State forests are owned and managed by the Provincial Forest Department and communities have no rights, whereas private forests, called Guzara forests, are owned by the communities but managed by the Provincial Forest Department. Communities have rights to the revenue from these forests. Communal forest is a sub category of the Guzara forests in which the forest is owned by the entire village.

Guzara forests were set apart to meet the domestic, agricultural, and pastoral requirements of village communities at the time of the first regular settlement 1872-73. The Guzara forests cover an area of 1.394 million ha in Hazara Civil Division. These are the property of landowners, but management of these forests rests with the Forest Department. Till 1950, management of Guzara forests was the job of the district administration. In 1950, the Government of NWFP issued Guzara Rules, thereby transferring management of these forests to the Forest Department for the purpose of scientific management.

The Guzara owners however remained disgruntled with the managerial control of the Forest Department. They considered the management style of the Forest Department to be too conservative and that it did not protect the forests from the incursions of migratory grazers and from the mounting demands for forest products by the growing resident human population. They made several petitions and finally the Agricultural Inquiry Committee recommended the transfer of forest management to owners organised into cooperatives. These societies took charge of felling and marketing operations in Guzara forests under their control. These societies were accused of uncontrolled felling and mass scale deforestation. In 1992, a huge flood occurred and caused heavy losses of human and physical assets. This was attributed to the over-cutting of trees in the catchment areas, so subsequently the Prime Minister of Pakistan took a decisive step and all cooperative societies were banned in 1992.

Since 1992, there has been a complete ban on felling of trees in Guzara forests for commercial purposes. However the owners are entitled to get timber for domestic needs with the permission of the Forest Department. Currently this concession is being misused and more trees are cut than prescribed in the permits. In addition, this illicit cutting has reached a peak and both local people and officials from the Forest Department are involved in the practice. This has led to the destruction of forest resources in the area.

Continuing resource degradation in the mountains has led to growing concern and a sense of urgency in the context of seeking strategies that can ensure the sustainable management of forest resources. Nowhere is the concern more marked than in the conservation of upland forests which contribute to the communities' subsistence needs and to the sustainable development of these natural forests.

Participatory forest management has emerged as a common strategy in the Hindu Kush-Himalayas to protect and manage forest resources in the mountains. A key element of this approach is collaboration between government institutions, non-government organisations, and local communities.

The present case study on 'Management of Guzara Forests' attempts to analyse the forest policies and their responses to the ground challenges affecting the sustainable management of forest resources in the area.

Objectives

This case study has four main objectives, as given below.

- To study the management of Guzara forests in the Hazara division of NWFP
- To examine flaws and deficiencies in the existing system of forest management in the area
- To assess the institutional capacity for decision-making, planning, and policy implementation and its response to field issues
- To identify options and approaches for equitable and sustainable development of the forest resources to ensure better livelihoods for mountain communities

Methodology

This report analyses the policies and institutional reforms that regulate the management of Guzara forests in the Hazara division of NWFP. Literature was reviewed on the institutional set-up, forest legislation, and forest policies and the baseline information of the study was widely reviewed. Primary data were collected through participatory rural appraisal tools, using a semi structured questionnaire. For this purpose, a survey was carried out in Hilkot watershed located in the Mansehra district of Hazara division.

Before actual data collection, a preliminary survey of the people in the study area of Hilkot watershed was undertaken. During this survey, the questionnaire was tested and, where required, changes were made, and a comprehensive list of the households in every village was prepared. Individual sample household heads were selected by random sampling. There are about 900 households in Hilkot watershed. Out of these, 180 household heads were interviewed including 90 men and 90 women. Thus the sampling intensity was 20%. After collection, the data were entered into a computer and analysed with Microsoft Excel.

Study findings

Guzara policy context

The documented forest history of pre-partition India dates back to the middle of the nineteenth century, the time when the British advent in India occurred. Not much is known about the pre-colonial pattern of land ownership, except that it was predominantly communal. It is estimated that at least 80% of the total natural resources of India were under some kind of common property regime. Forests, being no exception, were mostly held as common property by those living close to them (Azhar 1993).

After the colonisation of India, the British introduced a land settlement process. The state extended its control to forest land through the Indian Forest Act of 1878, and as such nationalised one fifth of India's land area. This provoked the local people because it limited their access to forest resources. After the independence of Pakistan in 1947, no significant changes were made and the status quo was by and large maintained. With passage of time conflicts arose and multiplied.

The forest resources of Hazara division are managed and controlled under national forest policies. The Government of Pakistan enacted a series of forest policies in 1955, 1962, 1975, 1991, and 2001. The first two policies were formulated entirely by representatives from the federal and provincial governments. They emphasised the management of public forest and were particularly concerned with the expansion of area under forest. The primary objective of forest management was the generation of revenue and maximisation of yields – environmental and social issues were not considered. Policy encouraged a top-down approach and reinforced the notion that communities had no interest in forest management and no stake in the preservation of public forests.

The forest policy of 1975 was formulated in response to the loss of forest resources after the separation of East Pakistan in 1971. The policy drafting committee included representatives from both government and non-government institutions. This was the first people-friendly policy enacted in the forestry sector. It recognised that management of Guzara forests should be entrusted to the owners themselves with the state taking on only supervisory responsibility. The policy recommended the formation of owners' cooperative societies, but stated that harvesting should be carried out entirely by public sector corporations. The 1975 policy soon fell prey to political expedience. The government that had formulated the policy was removed in a coup d'état in 1977 and the new government, which had no wish to continue with the initiatives of its predecessor, restarted the process of analysing the condition of the forests, rangelands, and other natural resources. From 1977 to 1988, forestry continued to be considered a subsidiary of agriculture, and forest policies were enacted as appendages of agricultural policies.

The 1991 policy represents a turning point, as it was influenced by donor agencies and Pakistani non-government organisations involved in implementing forestry programmes at the grassroot level. The most significant contribution of these grassroot development programmes has been demonstration of the participatory approach to forest management. The 1991 policy specifically mentions the introduction of participatory forest management. This policy also placed greater emphasis on social forestry and biodiversity conservation. However, due to rapid changes in governments and political instability, this policy remained confined to the files and shelves of government offices, and no implementation took place on the ground.

Forest legislation

The Forest Act 1927
The forest legislation in Pakistan is regulatory and punitive in nature. The Forest Act 1927, which remains the prime forestry legislation in Pakistan, was promulgated to provide strong legal support to the forest service in conserving and protecting public forests from human and animal damage. In fact forest law has been mainly a tool in the hands of the forest service to ensure the rational behaviour of people towards

national forests. Almost exclusive reliance on the force of law has been the strategy for achieving the main policy objective of forest conservation.

The NWFP Hazara Forest Act 1936
Most of the forests in Hazara civil division come under the legal category of privately-owned (Guzara) forests, although state-owned reserved and protected forests are also part of the area. Due to the heavy rights of the community to the forest, there is a separate Hazara Forest Act 1936 for the management and control of forest resources in this area. The penalties and procedures are the same as those specified in the Pakistan Forest Act of 1927.

Implementation of forest laws
Implementation of laws has always remained in question in developing countries. It is also the case for the forest laws of Pakistan. Several reasons are quoted for non-implementation of forest legislation. Local people cite corruption of forest officials as the main reason for non-implementation of the forest law. Forest officials argue that the territorial sizes are so large and the forest staff so few that it is impossible for the official responsible to protect this open wealth from theft. Forest crimes are difficult to detect. The law relies on the forest officer and locals to detect crimes. Lack of cooperation and understanding between the Forest Department and local people has made the legislation impracticable.

Khattak (1994) brings out an important point that the legislation says nothing about the obligations of the government and provides no mechanism for remedial action when forest depletion is the result of its own actions. He further emphasises that the punishments provided for forest offences have remained unchanged since the first version of the Indian Forest Act was promulgated in 1865, while the profitability of illicit trade in timber has increased 500 times. Considering difficulties in proving guilt for forest offences and the negligible punishment provisions in forest laws, they no longer act as effective deterrents to the commission of forest offences.

Writing on the enforcement of forestry legislation Ashraf (1992) concludes:
> "The effectiveness of forest laws is further undermined by the two factors. First, forest law matters are held in comparatively low esteem by the judiciary and other law enforcing agencies. As a result forest cases are given low priority and kept pending and undecided for long times. Second, some forest personnel invested with authority to book arrest and compound the forest cases misuse these powers. It invites public contempt of the law and instigates them to violate the law in protest, often without punishment".

So we can conclude that enforcement of forestry legislation has not been effective and as such has not ensured the orderly behaviour of the human population towards these forests.

Institutional set-up of the Forest Department

Forestry in Pakistan is a provincial subject and the provincial forest departments are the principal institutions that deal with forest management. The federal government is generally responsible for international liaison and inter-provincial co-ordination: the office of the Inspector General of Forests in the Ministry of Environment performs these functions.

In addition to managing the forests, the provincial forestry departments are generally also responsible for watershed management, range management in forest areas under their control, and, in some cases, wildlife management.

Provincial forest departments are the prime institutions for management of forests in the country. The Chief Conservator of Forests heads the Provincial Forest Department. There are several circles in the province each headed by a Conservator of Forests. One circle has several forest divisions. A forest division is the basic unit for forest management, and it is headed by a divisional forest officer. Each division is divided into several forest ranges and each forest range is headed by a range forest officer. The lowest tier in the hierarchy is the forest guard deputed to protect forest ranges.

The experience of forest cooperative societies: a participation that did not work

The Guzara forests cover an area of 1.394 million ha in Hazara Civil Division. These are the property of landowners, but management of these forests rests with the Forest Department. Until 1950, the management of Guzara forests was the responsibility of the district administration. In 1950, the Government of NWFP issued 'Guzara Rules', thereby transferring management of these forests to the Forest Department for the purpose of scientific management.

The Guzara owners however remained disgruntled with the managerial control of the Forest Department. They considered the management style of the Forest Department to be too conservative and that it did not protect the forests from the incursions of migratory grazers and from the mounting demands for forest products by the growing resident human population. They made several petitions and finally the Agricultural Inquiry Committee recommended transfer of management of these forests to the owners organised into cooperatives. Accordingly a new experiment in the shape of cooperative management of Guzara forests was launched in 1980 under the Cooperative Act of1925.

About 33 cooperative societies were formed in Hazara civil division for the management of Guzara forests. They carried out extensive harvesting of the forests for commercial purposes without considering the ecological consequences. There were frequent reports and complaints of mismanagement, massive irregularities in use of funds, and political hijacking of the societies. In 1992 there was a huge flood which was attributed to mass-scale deforestation in the catchment area, and because of this the then Prime Minister of Pakistan took a decisive step and abolished all the cooperative societies in 1992.

Recent institutional reforms

Since 1992 there has been a strong campaign in the country to bring about decisive changes in the forest policy. In this respect three main initiatives have been taken: a Forestry Sector Master Plan (FSMP); a National Conservation Strategy; and a National Environmental Action Plan. The Forestry Sector Master Plan was a national-level initiative focused entirely on increasing the area under forest from 5% to 20% through mass scale afforestation efforts. However this initiative did not succeed as expected and this was due to the fact that in Pakistan land available for growing trees is less than 20% of the total land area and there was little involvement of the forest dependent communities during the implementation. The National Conservation Stretegy (1992), taking lessons from these failures, went for alternative solutions that were technically and socially feasible. However, due to the weak implementation mechanisms of the

Strategy and its subsequent decentralisation to the provincial level, the initiative did not have much impact.

Keeping in mind the lessons learned from the implementation of the National Conservation Strategy the Government of Pakistan approved the National Environmental Action Plan in 2001. This Plan now constitutes the national environmental agenda. Its core objectives are to initiate actions that safeguard public health, promote sustainable livelihoods, and enhance the quality of life of the people of Pakistan.

Change in forest policies

With the evolution of new institutional changes and increased pressure of civil society for the devolution of forestry sector, changes were brought about in the policies and new forest policies and legislation were formulated. These are briefly discussed in the following.

The NWFP Forest Policy 1999 – Policy formulation is mainly the task of the Federal Government; the Government of NWFP also promulgated its own Forest Policy in 1999. NWFP has rich forest resources, a diverse ecosystem, and unique cultural and socioeconomic conditions. The policy was based on the principles of integrated resource management, participation of the people, promotion of the private sector, equity, public awareness, incentives, and cross-sectoral linkages. The policy also calls for forestry legislation to be revised and for institutional transformation of the forestry sector.

Forest Policy 2001– The recent debates about governance, poverty, and environmental sustainability have emphasised a 'rights'-based' approach in which equitable development is strongly associated with individual and communal rights. The current National Forest Policy (2001) mentions improved livelihoods as its fundamental goal. The policy calls for involvement of local communities in the implementation of projects, management of forests, and implementation of joint forest management.

The NWFP Forest Act 2002 – In order to provide legal cover to the ongoing reform process in the forestry sector, the Government of NWFP promulgated the Forest Ordinance of 2002. Later on, this ordinance was approved by the Provincial Assembly and became the Forest Act. The new legislation revised the Forest Act of 1927. The staff of the Forest Department became a Forest Force and penalties were increased for various forest offences. Introduction of joint forest management in Guzara forests was also included in the new Act.

Impact of forest policies on resources and rural livelihoods in Hilkot watershed

The Hilkot watershed
Hilkot watershed is in the Mansehra district of Hazara civil division, NWFP. The total geographical area of this watershed is about 1,600 ha. The area is a part of the catchment of the Siran River, one of the major tributaries of the River Indus draining directly into Tarbela, one of the largest reservoirs in the country, for hydropower generation and irrigation. Climatically the area falls in the humid temperate zone with elevation ranges from 1,342m to 2,672m. The total population of the area is 7,500, with a male-female ratio of 51.3: 48.7%.

Ethnically, the population is divided into three main groups: the Swatis and Syeds who are the owners of forest and agricultural land and hence socioeconomically advanced and the Gujars who are mostly tenants and are economically and socially suppressed.

The Swati and Syed reside in the lower communities of the watershed; namely, Hilkot, Syedabad, and Kandi, whereas the Gujars live in the upper communities of the watershed; namely, Sunbal, Bojri, Sathangali, Guldehri, Nakka Sher, Nakka Bissa, Dehri Numberdaran, Jogran, and Kund. According to the survey carried out in these villages, 60% were Gujars, 33% were Swatis, and 7% were Syeds.

Ownership of forests in Hilkot watershed
In Hilkot watershed, forests are held under a variety of ownership arrangements. There are two main categories of land tenancy: i.e., owners and tenants.

Owners – Owners mostly belong to two ethnic groups: Swati and Syed. They constitute about 40% of the total population of the area. They live in the lower watershed communities, namely, Hilkot, Kandi, Syedabad, and Malkan. They own agricultural and forest land. They inherited their lands from their forefathers, and this is recognised by the law of the land. They are in better socioeconomic condition than others due to the income from agricultural and forest land. They enjoy better facilities than others in education, communication, and health care too.

Tenants – Tenants mostly belong to the Gujar ethnic group. They constitute about 60% of the total population of Hilkot watershed. They live in the upper hilly areas. The majority of them live as tenants on the agricultural and forest lands of the owners. They cultivate the owners' lands and take a considerable portion of the agricultural produce from these lands. They also meet their needs for fuelwood, fodder, and timber from the forests, but they have no share in the revenue of the forests. Their main source of income is from rearing livestock and from daily wages for their labour. They have very poor access to education, communication, and health care facilities.

Forest area
The total forest area of Hilkot watershed is 710 ha (44.4%), out of which Guzara forest accounts for 378 ha (23.6%) and reserved forest 332 ha (20.7%). Blue pine (*Pinus wallichiana*) is the dominant species, mixed with deodar (*Cedrus deodara*) and fir (*Abies pindrow*) on ridges. The total volume of wood in Guzara and reserved forests is 118,645m^3 and 111,953m^3, respectively (Cheema 2000).

Conflicts
Due to the complex land-tenure system and ill-defined property rights, there have always been conflicts and disagreements among the various stakeholders in Hilkot. These conflicts are adversely affecting the natural resources of the area.

Conflicts between the government and local people – After the declaration of reserved forests, the local people never recognised these forests as the property of the government. Local people still believe that ownership of the resources in the area should be theirs. That is why they provide little assistance towards the protection and development of these forests. As a result there has been considerable illegal annexation of and encroachment on Guzara and reserved forests.

Conflicts between the government and owners of Guzara forests – Though Guzara forests are recognised by the government as private property, it is still holding control over them in the name of forest management. This has disgruntled the owners and now they are opposing government control of the forests. They want complete control of their property in terms of management, protection, harvesting, and development.

Conflicts between owners and tenants – There is a complicated land-tenure system in Hazara. Because the landholdings are big, owners are not able to mange their agricultural and forest land, so they keep tenants on their property for management and protection. These tenants have been living there for centuries. Now they consider these lands as their legitimate right, and the state law has also given them some concessions. Owners cannot replace them without following a lengthy legal procedure. The tenants want a substantial share, especially in forest resources which they consider to be common property resources. The owners are not ready to accept their demands. This has led the tenants to violate the forest laws and remove fuelwood, timber, and fodder from the forests in every possible way.

Access to forest resources

Despite a dissected land-tenure system, the conflicts between owners and tenants and the existence of authoritative forest legislation, the majority of the population in the watershed has access to forest resources. About 72% of households have access to Guzara forests and about 56% have access to reserved forests. There is less access to reserved forests because of greater departmental control and greater distances from people's homes.

Fulfilment of domestic needs for timber and fuelwood

The majority of the residents in the area meet their needs for timber, fuelwood, grass, and leaf litter from both Guzara and reserved forests. Legally, owners are only entitled to get timber from the Guzara forest after receiving written permission from the Forest Department. The Department issues permits to owners up to a maximum of four trees for home construction or other genuine reasons, but not for commercial felling. This right is misused often; and more trees are cut than stipulated in the permit, and these are sold through the black market. None of the owners admits that they have taken timber from the reserved forest. This is due to the fact that they have their own forest so they have no need to get timber from the state forest. The majority of owners purchase fuelwood because they do not have time to collect fuelwood from the forest. Secondly, they consider it beneath their social status to collect fuelwood.

Though tenants have no rights to Guzara or reserved forest, interestingly they get timber, fuelwood, litter, medicinal plants, and grass from both Guzara and reserved forests. Timber is collected only when needed, fuelwood is collected throughout the year, and grass is collected in the months of August and September. They pay nothing to the owners or to the Forest Department, but whenever they are caught, they are fined by the Forest Guards who take money from them according to the offence they have committed. Usually this fine ranges from Rs 500 to 1,000 for taking timber from the reserved forest. This is a kind of social proxy because it is taken without following the legal procedures.

Degradation of forest resources

Almost all respondents were of the opinion that the forest had been rapidly declining in the last ten years – the period during which the ban was imposed on commercial harvesting of trees. Illicit cutting of trees, overgrazing, lack of fuelwood alternatives, corruption of forest officials, and exclusion of local people from forest management were pointed out by the majority of respondents to be the main problems in the forestry sector in the watershed. Some people mentioned the population increase and others pointed to the lack of alternative job opportunities as the main reasons for forest degradation.

Forest management system

Currently there is only nominal forest management in the area. Legally a ban has been imposed on felling trees for commercial purposes. However, owners are entitled to get timber for domestic use provided they have a permit from the Forest Department. Nothing is done in terms of plantation and development of forests. This situation has led to the continuous decline in forest cover. Most local people are dissatisfied with the present system of forest management. They consider the present system a complete failure, due to its failure to protect the forests and fulfil the needs of the locals in an equitable way. The owners particularly are against this system which has excluded them from the management and control of their property. About 90% of the respondents were unaware of the recent developments and changes in forest policy and legislation.

Due to the ongoing promotion of participatory forest management and facilitation of the People and Resource Dynamics' Project (PARDYP) of ICIMOD in the area for dialogue and interaction between the forest department and the local people, joint forest management committees are now being formed in the area. These committees have representation from owners, tenants, women's groups, and local NGOs. The primary task of the committees will be the harvesting of windfalls from Guzara forests. Later they will be involved in other activities related to forest management in the area.

Impact of resource degradation on rural livelihoods

Because of continuous degradation, local resources are inadequate to support the population pressure. Due to this situation, people have started to leave their home areas and migrate to big cities and abroad where they can find better earning opportunities.

In the study area, this trend is increasing day by day and adult males are migrating to Islamabad, Rawalpindi, Lahore, Karachi, and the Middle East. According to the survey, 45% of the households have male members who have migrated to big cities and abroad in search of jobs. This trend is more conspicuous in Gujar communities where almost every household has one or more male family members in the cities. On average 1.4 persons in the sampled households were working in big cities in the country and abroad.

This trend has gained momentum in the last 20 years. After migration of adult males, about 36% of the household have given up some of their activities such as rearing livestock and cultivation of additional land, whereas 64% of the households have not given up any activity; the work of migrant family members is mostly carried out by the women. This has increased women's workloads in the area, as they have to look after their farms besides their household work.

Conclusions

After analysing the institutional set-up and ground realities, we have reached the conclusion that the present forest management system has totally failed to safeguard the interests of the locals and to conserve forest resources. The gap between the resource owners and managers has widened since the abolition of cooperative societies. Because of political instability in the country, lack of commitment on the part of the government, and exclusion of local people, forest policies are subject to rapid changes. Policies and management have always been ad hoc. These policies have never been implemented on the ground. It is widely believed that most forest policies have viewed people as the prime threat to the forests and have attempted to exclude

groups other than the government from decision-making. This approach not only affects the sustainability of people's livelihood strategies, but also increases the vulnerability of marginalised sections of the community. It ultimately leads to unsustainable management of natural resources and forest depletion. Thus, in practice, forest resources were made inaccessible to the poor and marginalised, whereas the influential along with members of the timber mafia consumed these resources as they wished. This dichotomy created feelings of lack of ownership among the marginalised adding to their miseries and encouraging them to adopt unfair means to meet their reasonable requirements for forest resources.

Due to the complex land-tenure system and ill-defined property rights, there have always been conflicts and disagreements among the various stakeholders in the area. These conflicts are adversely affecting the natural resources. Though Guzara forests are recognised by the government as private property, it is still holding control of these in the name of forest management. This has disgruntled the owners and now they are opposing the government control of forests. The owners want complete control of their property in terms of management, protection, harvesting, and development. The growing conflicts between the government and owners, as well as between the owners and tenants, have led to heavy destruction of the forests. Tenurial uncertainties and inequalities are a major cause of forest depletion. The owners consider it unbearable that they are being deprived of the rights already given to them by law. Tenants consider it inequitable for landlords to claim major benefits from forests even when they are not residing in the area.

Local people fulfil their demands for timber and fuelwood from these forests without any serious restrictions, albeit illegally. They contribute nothing to the development and protection of the forests in terms of plantation and security. On the other hand, officials from the Forest Department are least concerned about the decline of the forests. According to the local people they only seek to fulfil their vested interests and are fully involved in the illegal cutting of forests. This situation has encouraged illegal trade and black marketing of timber in the area.

Current forest policy and legislation are encouraging the participation of local people in the management of Guzara forests, but there is a need to implement these policies with full spirit and commitment.

Recommendations

For the sustainable development of forest resources and improvement in the livelihoods of rural people, the following suggestions and recommendations are made.

- The current system of forest management should be immediately replaced with a participatory forest management system in order to improve rural livelihoods and manage resources on a sustainable basis.
- The equitable participation of all stakeholders is essential in the newly established joint forest management committees in Guzara forests. The participation of marginalised groups must be ensured in these committees.
- There should be close collaboration between government institutions, non-government organisations and local communities to identify workable options for and approaches to sustainable management of Guzara forests.
- The management of Guzara forests should be gradually handed over to the owners, while the Forest Department should assume the supervisory and technical role. At

the same time a share of the revenue should be allocated to the tenants residing in these forests. This can be done through mutual consensus of the stakeholders.

- All the owners and tenants residing in the vicinity of Guzara forests should be allowed to get timber and fuelwood for their domestic needs and also to take part in reforestation and protection of forests. But this should be under a proper system evolved by the stakeholders themselves.

- In the case of reserved forests, the government should gradually give property rights to those who do not have rights in the Guzara forests temporarily, while retaining some degree of control in the beginning. After the capacity building of stakeholders and stability of the institutions, their rights should be legalised and the Forest Department should assume a supervisory role.

- In order to reduce pressure on Guzara forests, the government should seek the participation of locals in the protection and afforestation of reserved forests by giving them some incentives in the form of timber and fuelwood for their subsistence needs.

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Nepal's Buffer Zone Programme: A Showcase of a Participatory Approach to Protected Area Management

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Abstract

Protected area management is now focused on meeting people's basic needs so that resource use pressures on parks/reserves decrease. The buffer zone programme has made remarkable progress, particularly in natural resource conservation, social mobilisation and social capital generation, development of alternative energy, and human resource development at the community level.

The institutionalisation of different community-based organisations in buffer zones is a stepping stone towards empowering and involving people in resource management. Revenue sharing in buffer zones is considered to be an important factor in reducing park-people conflicts and enhancing the community's perceptions about protected areas. User group formation at settlement level is found to be very effective in improving social integration and encouraging a high level of people's participation. The participatory decision-making processes of buffer-zone institutions have made the people more accountable to buffer-zone communities. Capital generation and mobilisation is one of the key components of community development initiatives.

For the sustainability of the institution and programme, it is strongly recommended to improve buffer-zone legislation, forging partnerships with all relevant partners, establishing sustainable funding sources, and strengthening the buffer-zone networking forum in order to share experiences among various stakeholders laterally and vertically. Furthermore, it emphases improvement in management capability by providing training for community and staff at all levels. It is also suggested that a spatial strategy be introduced for promoting each protected area and developing a plan that is pro-poor, pro-women, and pro-special target groups. Adequate conservation awareness and outreach and skill enhancement programmes should be designed to meet the needs of the target groups and encourage local people to be custodians for the conservation of resources.

Introduction

Nepal, a magnificent land of biological, cultural, and ethnic diversity, lies in the central part of the Great Himalayan Chain. The country is sandwiched between the Tibet Autonomous Region of China to the north and India to the south, east, and west. The Himalayan Kingdom is positioned at the interface of the Indo-Malayan and Palaearctic biogeographic realms and contains 4 of 200 global ecoregions. By virtue of its geographical location and sharp altitudinal variation ranging from the lowland Terai (<150m) in the south to the superlative grandeur of the high Himalayas, including Mt. Sagarmatha (8,848m), in the north, Nepal hosts a wide variety of species of both flora and fauna and displays a unique ecological spectrum which is of global importance.

Over time, the situation in the lowland Terai has changed due to unprecedented population growth and mass migration of hill people on the promise of new land after the eradication of malaria from the Terai in the sixties. The average population growth

rate in this area in the past was 2.38% (Ninth Plan, NPC 1998). Heavy pressure was exerted on the natural resources to meet the growing needs of the people. As a result, most of the luxuriant sub-tropical forest began to decline or was fragmented following the clearance of pristine wildlife habitats for human settlement and national development. Big game animals also began to disappear due to rampant poaching and other insidious human influences. The influx of migrating hill people aggravated the problems, particularly in the Chitwan Valley, so that about 60% of the forests were cleared to establish settlements and national infrastructure. The protection of threatened species, such as rhinoceros and tigers, and their habitats has become a need of utmost importance and an uphill task.

This paper provides a brief description of the evolution of Nepal's protected area system and its adaptive management and presents a participatory model for managing the resources of protected areas for long-term viability.

Biogeographical features of Nepal

Nepal (which lies between 80^0 13' 46" and 88^0 14' 23" longitude and $26^010'57"$ and $30^035'07"$latitude) encompasses an area of 147,181 sq.km. Broadly speaking, it has five physiographic zones: i) the Terai, ii) Siwaliks, iii) mid-hills, iv) high mountains, and v) high Himal. The Terai occupies approximately 23% of the total area of the country, whereas the hills and mountains cover 42% and 35% respectively. Nepal has 11 bioclimatic zones that range from tropical to nival and covers four ecoregions; namely, the Eastern Himalayan Broadleaf and Conifer Forests, Terai-Duar Savannas and Grasslands, Eastern Himalayan Alpine Meadows, and Western Himalayan Temperate Forests. There are more than 36 wetland sites; they serve as important wintering grounds for migratory and resident birds.

Phyto-geographically, Nepal is a meeting place of eastern and western Himalayan flora. Between these extremities, 118 types of ecosystems, 35 forest types, and 75 vegetation types have been identified, ranging from the luxuriant sal (*Shorea robusta*) forest of the Terai to the highland pastures and treeless zones of the trans-Himalayas (Stainton 1972). Floristically the Nepal Himalayas are rich and are the home of many species of orchids and medicinal and aromatic herbs. About 370 plant species are endemic to Nepal, several of which are endangered. Nepal contains about 2% of the flowering plants, 8% of the birds, 4% of the mammals, 2.2% of the fish, and 1.4% of the reptiles and amphibians found on earth, although it only occupies 0.1% of the global landmass (Table 1).

Table 1: Status of b iodiversity in Nepal			
Flora		**Fauna**	
Angiosperms	5160	Birds	844[a]
Gymnosperms	28	Mammals	181
Algae	687	Reptiles	100
Ferns & fern allies	380	Amphibians	43
Mosses	463	Fish	185
Lichens	465	Butterflies	635
		Moths	6000
[a] Currently 861 speci es of birds have been recorded by Bird Conservation Nepal (BCN) Source: BPP 1996			

The endangered mammals include the rhinoceros, tiger, wild elephant, snow leopard, musk deer, swamp deer, red panda, and dolphin. Similarly, the gharial crocodile and python are among the endangered reptiles. Common animals include three species of deer (chital, hog deer, and barking deer), common leopard, Himalayan tahr, black bear, sloth bear, monkeys, and others.

Status of protected areas

During the last three decades, Nepal has not just been an exemplary model of conventional wildlife conservation, but has also successfully established a model of participatory management of protected areas by introducing the concept of buffer zones in the peripheral areas of parks. In 1971, the National Parks and Wildlife Conservation Section under the Department of Forest was established to carry out the task of wildlife conservation. The National Parks and Wildlife Conservation Act (1973) was promulgated for wildlife conservation and protected area management in the kingdom. The Royal Chitwan National Park was designated as the first national park in the country for protecting the rich biodiversity of the area and the endangered rhinoceros and tiger. In 1980, the Department of National Parks and Wildlife Conservation under the Ministry of Forest and Soil Conservation was created, in view of the increasing responsibility for wildlife conservation and management of an extensive network of protected areas.

More national parks, reserves, conservation areas and buffer zones were established in the mountains and Terai after the establishment of the Royal Chitwan National Park. This trend continued and protected area coverage increased tremendously by 194% and 98% in the periods 1981-90 and 1991-1998 respectively (Annex 1). These protected areas encompass representative examples of various ecosystems in the Kingdom, extending from the tropics of the lowland Terai to the Himalayas and trans-Himalayan region. They cover a total area of 28,149 sq.km., which is over 19.4% of the total land area of the country. Today, there are nine national parks, three wildlife reserves, three conservation areas, one hunting reserve and buffer zones of nine national parks and wildlife reserves (Annex 2).

Among these protected areas, Sagarmatha and Chitwan were designated as World Heritage Sites in 1979 and 1984 respectively. Koshi Tappu Wildlife Reserve, Bishazari Tal, Ghodaghodi Tal, and Jagadishpur Reservoir were listed as Ramsar Sites in 1987 and 2003.

Conservation policies, legislation, and plans

The Constitution of Nepal 1990 states that the:

"State shall give priority attention to the conservation of the environment... and also make special arrangement for the conservation of rare animal species, the forests and the vegetation of the Kingdom" [Article 26 (4)].

The Nepal Environmental Policy and Action Plan 1993 underlines the importance of preservation of endemic and endangered species and their habitats, the promotion of private and public institutions for biological resource inventory and conservation, and the strengthening of the capacity of the Department of National Parks and Wildlife Conservation. The National Conservation Strategy for Nepal 1987 emphasises sustainable use of natural resources and compatible land use.

The Master Plan for the Forestry Sector (1989), which is the main forestry policy, stresses that:

"..... representative examples of ecosystems unique to Nepal, areas of special scientific, scenic, and recreational or cultural values will be protected. Maintenance of the ecological and environmental balance and biological diversity is needed for the sustained well-being of the nation...... Tourism that affects protected areas will be regulated and kept within the carrying capacity of the local ecosystems."

Besides the 'Plan for the Conservation of Ecosystems and Genetic Resources' (MPFS 1989), one of the primary sectors of the Forestry Master Plan deals with in situ and ex situ conservation of biodiversity. It has formulated relevant policies on conservation and designed programmes for effective management of protected areas.

Likewise, the Nepal Biodiversity Strategy (NBS 2002) emphasises the importance of resource conservation, sustainable use, and fair and equitable sharing of benefits. The strategy also focuses on five key areas: forests (protected area, community forestry, and non-timber forest products, wetlands, rangelands, mountain biodiversity, and agrobiodiversity (livestock genetics). The document equally emphasises the importance of the landscape approach and integrating people's participation in conservation planning and resource management.

The Wetlands Policy (WP 2003) places value on the conservation of wetland biodiversity and its wise use through participatory management of wetlands. It further emphasises the need to identify and classify the wetlands of Nepal and has identified six types of wetland based on management regimes: community-managed wetlands, private wetlands, leasehold wetlands, collaboratively managed wetlands, religious wetlands, and government-managed wetlands.

In 2003, His Majesty's Government of Nepal promulgated three important policies related to conservation and management of protected areas in order to promote public-private partnership in conservation and to facilitate the sharing of benefits from conservation to improve the standards of living of the poor. These policies are: Wildlife Farming, Breeding and Research; Captive Elephant Management; and Contracting the Management of National Parks, Reserves, and Conservation Areas to non-government organisations (NGOs) 2003.

The National Parks and Wildlife Conservation Act (1973) provides the legal framework for wildlife conservation and the management of protected areas. The Act has defined various categories of protected areas and listed 26 species of mammals, 9 species of birds, and 3 species of reptiles that are endangered as protected species of Nepal. Several separate byelaws and guidelines have been framed to strengthen the effective management of protected areas; among them the Royal Chitwan National Park Rules, Himalayan Park Rules, Conservation Area Rules, Buffer Zone Management Rules, and Buffer Zone Management Guidelines.

Since sustainable conservation is not conceivable without active participation of the local community, the National Parks and Wildlife Conservation Act was amended in 1993 to accommodate people's involvement in conservation. This amendment has become a marker in protected area management for switching from a conventional approach to a collaborative one in which sharing revenues and people's participation became mandatory.

The government's periodic plans also accentuate the sustainable use of resources and involvement of local people in conservation of biodiversity. For example, the Eighth Five Year Plan (1992-97) (NPC 1992) stresses the conservation of ecosystems and genetic resources through equitably sharing the benefits with local people, whereas the Ninth Five Year Plan (1997-02) put priority on the development of a protected area management plan, involvement of stakeholders in preparation of conservation legislation, and implementation of environmental impact assessment guidelines. The Tenth Five Year Plan (2002-07) emphasises sustainable use of natural resources for poverty reduction or improvement in rural people's living standards.

Species' conservation plans, such as the 'Tiger Conservation Plan for the Kingdom of Nepal (DNPWC 1999)' and 'Terai Arc Landscape Strategy and Management Plans for Chitwan and Bardia National Parks', have been approved and several more are being prepared.

Conventions and conservation partners

Nepal is a State Member of the World Conservation Union (IUCN) (1974); a State Party to the Convention on International Trade in Endangered Species of Flora and Fauna (CITES) (1975); and a member of the World Heritage Convention; the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) (1978); the Wetland Convention (1987); the Convention on Biological Diversity (1992); and the Global Tiger Forum (2001). There has been important assistance from the World Wildlife Fund (WWF) and the United Nations Development Programme and Food and Agriculture Organization (UNDP/FAO) from the very beginning in wildlife conservation. Several conservation partners (UNDP, WWF, the UK Department for International Development [DFID], Netherlands Development Agency [SNV], IUCN, and King Mahendra Trust for Nature Conservation) are supporting Nepal's conservation efforts. Nepal is also promoting transboundary cooperation in conservation with its neighbouring countries since wildlife do not recognise political boundaries.

Evolutionary changes in protected area management

An approach of adaptive management of protected areas has been taken considering the needs and emerging challenges faced by the management and also to suit local conditions. In the early stages of development, there was a dire need to protect endangered species of wildlife and their habitats, as their populations were declining fast as a result of mounting anthropogenic pressures on forest resources. Hence, the major focus was on species' conservation for their revival, as they were under constant threat from rampant poaching and habitat degradation.

The strict law enforcement practices in protected areas proved successful in controlling illegal human activities in the core areas and in facilitating the significant growth of wildlife populations. For example, the rhino population has reached an estimated 612 (Rhino Count 2000) from less than 100 individuals. However, it also gave rise to conflict between the park management and local people over the use of forest resources and the damage caused by wildlife.

These protected areas have been developed as popular tourist destinations for wildlife viewing. Over 60% of tourists coming to Nepal visit protected areas for trekking, mountaineering, and wildlife observation. As a result, tourism has become a major source of income to most of the protected areas, and it serves as the financial backbone for the implementation of buffer zone programmes (Table 2).

Table- 2: Annual visitors and revenue in protected areas		
Fiscal year	No. of visitors	Revenue (NRs.)
1995/96	111,211	77,072,353
1996/97	152,252	72,395,881
1997/98	139,286	79,247,543
1998/99	148,728	89,599,892
1999/00	163,574	93,502,138
2000/01	161,020	134,098,495
2001/02	124,108	67,220,748
US$1= NRs 56 (1996); NRs 77 (2002) approx . Source: DNPWC (2002)		

Thus, Nepal's experience has shown that strict law enforcement alone is not enough for effective wildlife conservation in the long term. While the use of forest resources has degraded wildlife habitats, poaching has threatened the loss of several species. In the process of seeking local people's support while meeting their needs, local residents have been permitted to collect grass and reeds from protected areas of the Terai annually to meet their basic household needs.

Likewise in mountain national parks, local people's traditional practices of using forest products were legitimised by the Himalayan National Park Regulations 1979, permitting local people to collect firewood and fodder and graze their livestock on a rotational basis. In all protected areas, annual consultation meetings were held with local communities to improve park-people relationships and generate public awareness about the importance of conservation.

A participatory approach was adopted in the early 1990s with the introduction of conservation areas based on the principle of integrated conservation and development. The Annapurna Conservation Area Project was established in 1986 and the responsibility for its management was entrusted to the King Mahendra Trust for Nature Conservation in partnership with the local people. In this respect, the fourth amendment to the National Parks and Wildlife Conservation Act made in 1993 is a landmark in biodiversity conservation, especially in light of the policy shift from a conventional approach to management to a participatory one in which local people are recognised as partners in biodiversity conservation.

Another gradual but major policy change has been the embracing of a landscape approach in conservation planning in order to provide larger habitats for mega wildlife species and ensure the long-term survival of endangered wildlife species. This approach is based on the belief that the larger the habitat the better the chance of survival of a species in the long run. His Majesty's Government of Nepal has implemented the Terai Arc Landscape Programme in collaboration with WWF Nepal and the Western Terai Landscape Programme with the support of SNV and the UNDP and Global Environment Facility. The evolutionary policy changes can be summarised as follows.

1970s	-	More focus on species or strict protection
1980s	-	Participatory approach/Integrated Community Development Project (Conservation Area)
1990s	-	Buffer zone concept (revenue sharing)
2000 onward	-	Landscape-level conservation, partnership, and so on

Buffer zone concept and policy context

Protected areas are the cornerstone of the conservation movement. They are at one end of a spectrum of land use ranging from strict protection to multiple use. The overarching goal of the protected area system is to showcase the relevance of protected areas to sustainable development as well as biodiversity conservation and to secure the benefits of the enduring resources of protected areas for present and future generations. Successful integration of protected area management with local community development requires systems to encourage the involvement of local people at all levels and designed to suit local needs.

Today protected areas are perceived as community assets and tourism as a means to help local economies. Protected areas, therefore, are a crucial element in achieving sustainable development and contributing to global goals – for instance those proposed by the World Summit on Sustainable Development and the United Nations Millennium. Development Goals (5th IUCN World Parks Congress 2003) In addition, most countries have enacted conservation laws, established institutions and created protected areas to deal with the issues. There has been a global recognition that local communities must be actively involved and their needs and aspirations considered if biodiversity is to be conserved and sustained. Community-based conservation involves management of biodiversity by, for, and with local communities.

Biodiversity is a vulnerable resource and will suffer from pressure. If people in and around a protected area lack adequate economic alternatives, their survival strategies are likely to threaten resources inside the protected areas. It is a universal fact that damage to crops and property by wildlife is one of the most widespread and significant problems faced by frontline communities living in or next to protected areas. Thus, the management approach has been tailored from an absolute conventional type of preservation to a participatory one.

Today there is more emphasis on people's participation in the management and strengthening of community institutions to ensure the sustainability of protected areas. Though the notion of participation was brought into focus in the 1930s, it is only since the late 1960s and 1970s that the concept started to be used in the context of the newly-developed sub-discipline of development administration (Garcia-Zamor 1985).

Nepal's experience has also shown that sustainable conservation is possible only with people's involvement. The country has developed a strong foundation in community-based conservation, management of natural resources, and livelihood development. This provides a critical platform upon which to build. People-centred programmes in the buffer zones of protected areas and community forests in productive areas have been implemented throughout Nepal. Thus, the fourth amendment to the NPWC Act not only made a provision for designating buffer zones around parks/or reserves but also for sharing park revenues for community development and to improve natural resource management. The buffer zone programme, therefore, is aimed at institutionalising community-based organisations; improving the livelihood conditions of buffer zone communities; and contributing significantly to biodiversity conservation by reducing prevailing conflicts through forging partnerships with local communities.

Buffer zones have been defined as designated areas surrounding national parks or reserves within which the use of forest products by local people is regulated to ensure sustainability. In other words, it is practically an impact zone. The buffer zone may

contain forests, grasslands, grazing lands, wetlands, private, and public land. It is explicitly mentioned in the legislation that land tenure will not be affected by establishing a buffer zone.

The Buffer Zone Management Rules (HMGN 1996) have clearly spelled out the criteria for designing buffer zones; requirements for management plans and user committees' operation plans; and provisions for community, religious, private, and buffer zone forests. The rules strictly restrict the export of timber from community forests out of buffer zones unless the demands of the buffer zone community have been fulfilled. In addition, it mentions the institutionalisation of community-based organisations and allocation of funds and provides guidelines for planning and prioritising programmes to be implemented in the buffer zone.

The Buffer Zone Management Guidelines (1999) have further simplified the provisions given in the rules to facilitate smooth implementation. The guidelines have made provisions for formation of user groups at settlement level and have fixed a ceiling to the a percentage of the budget allocated for conservation (30%), community development (30%), income generation activities (20%), conservation education (10%), and administrative costs (10%). It has also given added responsibilities for programme monitoring to the buffer zone management committee, the apex body in the buffer zone.

The user committees prepare five-year plans by compiling the needs and aspirations of the user groups. These plans are then compiled to prepare a buffer zone plan which forms the basis for using the buffer zone fund received from park revenue. The activities are implemented by user groups and committees and public auditing; participation is the backbone of success. User committees ensure coordination and organise all the partners working in their area according to the buffer zone regulations and guidelines. The chief warden is the member secretary of the buffer zone council and not only facilitates the flow of funds from the centre to users but also ensures that the fund is used as per the norms. The council, committee, and groups meet as per their needs. The council acts mostly on policy and decisions and the committee is a bridge between the council and users, filling an implementation/facilitation role. Necessary staff members are hired from the local community to assist the programme, and the respective sector offices and range posts support the buffer zone programmes. Partners working in the field also collaborate with the buffer zone organisation to make the programme more effective.

Case study of buffer zones

Secondary information was gathered from the protected areas, a review of relevant literature and documents, the report on the Impact Assessment of the Buffer Zone Programme in Nepal (PCP 2004) and the author's own long experience in protected area management. In the following, the overall buffer zone programme in Nepal is assessed with particular reference to the Royal Chitwan National Park.

The Royal Chitwan National Park, a World Heritage Site, is situated in the lowland Terai of central Nepal. This was the first national park in the country; it has a buffer zone of of 750 sq.km. The buffer zone was established in 1996. The park is surrounded by 37 village development committees (VDCs) and two municipalities. Various conservation and community development programmes have been carried out in the buffer zone. Since its inception it has received the largest sum of money of all the buffer zone areas. Community-based organisations have already successfully completed their five-year

terms and buffer-zone institutions have been reorganised according to the Buffer Zone Management Guidelines 1999.

Achievements

Buffer zone coverage and institutions

Nepal's experience in biodiversity conservation has revealed that successful conservation is not possible without local people's support, especially from those living on the fringe areas. His Majesty's Government of Nepal initiated the establishment of buffer zones around the parks/reserves in an endeavour to make local people self sufficient in forest resources and develop their stewardship in conservation. The objective of the buffer zone programme is to reduce biotic pressure in core areas and improve the socioeconomic conditions of local communities by strengthening and mobilising community-based buffer zone institutions.

In this process, over 4,000 user groups, 140 user committees, and eight buffer zone management committees have been formed; they cover 147 village development committees and municipalities and a population of more than 565,000 inhabitants including those in the proposed buffer zones (Tables 3-5).

Table 3: Buffer -zone coverage

Buffer Zone	Year of Declaration	Area (sq. km.)	No. of Districts	No. of VDCs/ Municipalities	Households	Population
RCNP	1996	750	4	37	36,193	223,260
RBNP	1996	328	2	17	11,504	120,000
LNP	1998	420	3	34	12,509	54,326
SPNP	1998	1349	2	17	2,695	11,600
MBNP	1999	830	2	12	6,000	32,000
SNP	2002	275	1	3	1,288	5,869
RSWR	2004	152	1	11	17,886	100,953
KTWR	2004	173	3	16	10,693	17,950
PWR	2005	298	3	10+1 hamlet	7,228	43,228
Total		**4,574**	**21**	**157+1 hamlet**	**10,5996**	**609,184**

KTWR = Koshi-Tappu Wildlife Reserve; LNP = Langtang National Park ; MBNP = Makalu Barun National Park ; RBNP = Royal Bardia National Park ; RCNP = Royal Chitwan National Park ; RSWR = Royal Suklaphanta Wildlife Reserve; SNP = Sagarmatha National Park; SPNP = Shey Phoksu ndo National Park ;

Table 4: Community institutions in buffer zones

	RCNP	RBNP	LNP	SPNP	MBNP	SNP	RSWR	KTWR	PWR	Total
BZMC	1	1	1	1	1	1	1	1	1	9
UC	21	15	21	17	12	3	17	8	10	124
UG	1468	83	315	90	88	28	450	434	633	3589
FO	54	76	34	42	73	7	11	69	73	439

BZMC= buffer zone mana gement committee; FO = functional organisation eg., community forest u ser groups, irrigation user groups, tourism management sub committees , etc; UC= user committee; UG = user group

Table 5: Number of community institutions proposed in typical buffer zones

	KNP	RNP	Total
Buffer zone management c ommittees (ad hoc)	1	1	2
User committees	8	8	16
User groups	317	109	426

KNP = Khaptad National Park; RNP = Rara National Park

Sharing of park/reserve revenue

The government has made a provision for ploughing back up to 50% of the revenue earned by national parks and wildlife reserves. More than 220 million Nepalese rupees have been channelled into the implementation of buffer zone development programmes in four national parks between fiscal years 1995/96 and 2003/04 (Table 6). About 61,494 households and 403,455 buffer zone residents in Chitwan, Bardia, Langtang, and Sagarmatha national parks have benefited from this programme.

Table 6: HMG fund allocation to buffer zones of different parks					
Fiscal year	RCNP	RBNP	LNP	SNP	Total (NRs)
1995/96	280,833				
1996/97	24,145,331	1,231,220			
1997/98	24,075,096	3,740,415			
1998/99	27,271,889		2,209,410		
1999/00	30,864,147	3,807,884			
2000/01			4,818,385		
2001/02					
2002/03					
2003/04	70,272,000	8,397,121	7,099,404	12,604,944	
Total	**176,909,296**	**17,183,641**	**1,41,27,198**	**1,26,04,944**	**220,825,000**
LNP = Langtang National Park; RBNP = Royal Bardia National Park ; RCNP = Royal Chitwan National Park; SNP = Sagarmatha National Park					

The buffer zone of Royal Chitwan National Park has received the largest sum and used NRs 133,500,000 in various activities in the buffer zone. An amount of NRs 43,500,000 remains unused. The trend of present expenditure is in accordance with the buffer zone management guidelines. Previously, NRs 82.7 million was spent on infrastructural development as the people's priority was on community development rather than conservation. Huge amounts of unspent money indicate that the absorptive capacity of community institutions is still underdeveloped in terms of the planning and efficient management of programmes. At present, people's contribution in kind is about 36%, which is less than expected.

Biodiversity conservation facility and community capital
One of the major aims of the buffer zone programme is to improve the socioeconomic conditions of local communities by creating income-generating opportunities. The community savings and credit scheme has become the key to keeping local community groups cohesive and active. Community capital is an internal resource that helps carry out micro-credit based income-generating activities and a large amount of Rs 73 million has been saved and mobilised among the group members with nominal interest. Similarly, the Biodiversity Conservation Facility provided the seed money to communities to promote and develop appropriate rural technology for resource management. About NRs 26 million has been disbursed to seven protected areas where a UNDP-assisted participatory conservation programme is being implemented (Table 7). Mobilisation of such funds has been very popular and successful among the communities. Several programmes are underway to institutionalise mobilisation of such funds through cooperatives. To date, 38 cooperatives have been registered and 60 new ones are in the process of registration.

Table 7: Community capital and biodiversity conservation facility		
National Park/Reserve	Community Savings	Biodiversity Conservation Facility
Khaptad National Park	2,332,646	1,029,599
Koshi Tappu Wildlife Reserve	5,325,638	3,074,364
Parsa Wildlife Reser ve	7,134,944	5,849,950
Rara National Park	1,290,167	2,365,892
Royal Bardia National Park	73,613,050	3,616,353
Royal Chitwan National Park	39,573,060	5,894,636
Royal Suklaphanta Wildlife Reserve	11,849,667	4,181,863
Total	**141,119,172**	**26,012,657**

Buffer-zone community forests
About 45% of the forest has been identified as buffer-zone forest. Around 42,370 ha of community forests in buffer zones have been handed over to local communities for management and sustainable utilisation of forest resources to meet their needs. So far, 39,200 households are benefiting from the community forestry programme. These community forests have also become extended habitats for several wildlife species (Table 8). Similarly, nine private forests have been registered in Royal Chitwan National Park. After handing over the buffer-zone community forest, dependency on the protected areas for fuelwood has decreased from about 80% to about 60% (PCP Impact Assessment Report, 2004).

Table 8: Buffer zone community forests and beneficiaries				
Buffer Zones	No. of CF (handed over)	CF in hectares	Beneficiary HH	Remarks
KTWR	1			handed over by district forest office
LNP	35	4,572	9,071	
MBNP	88	59,400	6,037	in the process of handover
PWR	6	723	2,075	handed over by district forest office
RBNP	32	8,935	9,719	
RCNP	17	2,810	8,424	46 CF constitution s registered
RSWR	10	550	2,094	
SNP	4	19,457	278	
SPNP	18	5,324	1,507	
Total	**123+88**	**101,772**	**39,205**	
CF = community forests; HH = hou seholds; KTWR = Koshi-Tappu Wildlife Reserve; LNP = Langtang National Park ; MBNP = Makalu Barun National Park ; RBNP = Royal Bardia National Park ; RCNP = Royal Chitwan National Park ; RSWR = Royal Suklaphanta Wildlife Reserve; SNP = Sagarmatha National Park ; SPNP = Shey Phoksundo National Park)				

The adoption of biogas plants has been very encouraging and successful. Up to 2003, the installation of biogas helped to conserve about 8,000 ha of forest annually, and the same could be used for fuelwood and fodder by the community. Biogas has reduced pressure on park forests; it could reduce the fuelwood demand by 12,000 tonnes annually (PCP Impact Assessment Report, 2004).

Similarly, crop production has increased by about 35% in the Royal Bardia National Park buffer zone and by about 25% in the Royal Chitwan National Park buffer zone

between 1996 and 2003. Cropping intensity increased to about 200% from 150% in both buffer zones as a result of increased irrigation facilities and stall-feeding of livestock (Impact Assessment Report, 2004). Nearly 9,700 people have received various types of training for skill development following the initiation of the buffer zone programme.

Main findings

The main findings from the buffer zone programme reveal that local people have been very motivated towards conservation and have begun to realise the importance of protected areas. It has harmonised the relationship between the park and people residing in the buffer zone, and they have developed a sense of belongingness to protected areas. There are still many more things to be improved in legislation, management, and administrative matters for effective implementation of the programme, however (Table 9). New challenges are emerging in this field of protected area management.

Issues and challenges
Some of the major challenges and issues are summarised below.

- How to mainstream the special target groups so that they form a substantive representation in buffer-zone institutions? At present, their representation in buffer-zone institutions is very low and their participation in decision-making is virtually nil.
- How to keep buffer-zone institutions cohesive and active or self-reliant, since a number of buffer-zone institutions have been formed at different levels with specific terms or timeframe?
- How to achieve the sustainability of the programmes undertaken by the buffer-zone institutions? The sustainability of programmes is always under scrutiny.
- How to motivate the community towards conservation rather than to the development of physical infrastructure? Past records show that infrastructural development has become dominant activity in buffer zones, since the groups are more interested in community development than in conservation because they are more concerned with immediate benefits and are less worried about long-term returns.
- How to strike a gender balance or increase women's representation on user committees and buffer-zone management committees? Women's representatives on user committees and buffer zone management committees are few. Under such circumstances, almost half of the population has been left out in the process of forging partnerships in the programme. And women have little say in resource use and benefit-sharing practices.
- How to cope with compensation for the lands that come into protected areas due to the change of river course/or bank cutting? This issue is proliferating in Terai protected areas and pressure is mounting to provide compensation since the National Parks and Wildlife Conservation Act has made provision for compensation.
- How to sustain the relief support for livestock depredation? The practice of providing relief support to affected families is relatively rare and pressure is mounting for appropriate relief.
- How to address crop compensation to individuals? Incidents and extent of crop damage are increasing in both mountain and Terai protected areas because of the growing population of wild animals.
- How to address the imbalance in revenue sharing among buffer zones? The amount of revenue allocation to buffer zones depends entirely on the income of the individual protected areas, which relies largely on the number of visitors to those areas.

Table 9: SWOT analysis of the buffer -zone programme

Strengths (achievements)	Weaknesses (internal constraints)
General	**General**

• Conservation for the people or people for conservation
  - Management authority given to community -based organisations , people's feeling of ownership
  - Friendly polic y for people's participation (legal base)
  - Benefit -sharing with community
• Community institutions established
  - Buffer zone m anagement committees, user c ommittees, user groups, functional g roups, community forest g roups, and so on
• Improves resource management
  - Buffer zone community forest
  - Provides forest products to local communities
  - Livestock management
  - Conservation programme
  - Community -level anti -poaching campaign
  - Additional habitat for wildlife
• Funding
  - Sufficient inco me from the park
  - 50% sharing of the park revenue
  - Biodiversity Conservation Fund
  - Internal community fund
  - Cooperatives
  - Relief fund
• Enhances sustainable community development
  - Increases economic benefits to the people from touris m development
  - Resolving conflict
• Capacity building
  - Programme planning and management
  - Buffer zone management p lan
  - Operation plans of user groups
  - Skill development and income generation opportunities
• Others
  - Conservation aware ness
  - Buffer -zone networking forum
	• Inconsistency in legislation (Act s, Regulations , and Guidelines)
	• Different interpretation of buffer zone management regulations
	• Increasing people's expectations and needs
	• Slow declaration process for buffer zones (institutional conflict of interests)
	• Distortion of buffer -zone concept
	• Buffer -zone demarcation
	• Crop damage and depredation
	• More focus on physical development
	• Buffer zone management committee roles and responsibilit ies very limited
	• Special target groups not well addressed
	• Institutionalising Biodiversity C onservation Facility, integrated community forestry, and cooperatives
	• Capacity building
	  - Low capacity of community -based organisations in planning and management
	  - Staff's low level of skill in social mobilisation and community development
	  - Basic training for operating biogas
	• Natural resource conservation
	  - Land -use planning/zone
	  - Encroachment
	  - Accidental fire
	  - Floods
	  - Grazing
	  - Driftwood policy
	  - Slow handover of community forest
	  - Lack of forests for community forest (mountains / Koshi -Tappu Wildlife Reserve)
	  - Community forest's income and production and use not monitored and data not available
	• Administrative/management
	  - Inadequate park staff
	  - Inadequate monitoring of programmes
	  - Inadequate coordination and networking
	  - Monitoring and evaluation
	  - Instalment disbursement of fund
	  - People's participation not as expected
	  - Inadequate physical infrastructure
	  - Absorptive capacity of community
	• Financing
	  - Inadequate resources
	  - Distorted protected area income and its distribution
	  - Difficult to car ry small projects due to budget ceiling
	  - Confusion in programme headings in guidelines
	• Others
	  - Low level of conservation awareness
	  - Baseline information/database
	  - Research (ecological & social)

Threats (external constraints)	**Opportunities**
• Political instability • Declining trend in park revenue • Low income of some parks/reserves • Compensation provision for river cutting • Encroachment in buffer zone	• Working in partnership • Developing alternative resources (fodder, fuelwood, biogas) • Diversifying income -generation activities (eco -tourism, fish f arming, poultry, piggeries) • Reaching the poorest of the poo r and ethnic groups (Majhi, Bote, Musar) • Mainstreaming gender (women's empowerment and representation in community -based organisations) • Outsourcing of funds

Strategies

The following strategies are recommended for improving the effectiveness and sustainable management of buffer zones in Nepal.

Improve buffer-zone legislation – There is a need to overcome the inconsistency in the Acts, Regulations and Guidelines pertaining to buffer-zone management and include/improve some of the provisions to address special target group representation, user groups, buffer-zone management committees, and compensation issues by amendments.

Initiate consultation for framing policies on crop damage and driftwood – The issue of crop damage and use of driftwood is becoming more prominent day by day. Conducive and sustainable mechanisms should be developed to address these issues in the future.

Institutionalise the biodiversity conservation fund – A large sum of money has been deposited in seven protected areas where the participatory conservation programme is working. This money has not been mobilised properly due to the fact that there is no institutionalised system in place, although some initiatives have already been taken, the process needs expediting.

Expedite handover of community forests – Several community forests have been handed over to communities, but there are still many more to be handed over. Due to the lengthy and tedious process of taking stock/inventory of the forests, it is taking longer than expected to hand over community forests. The inventory process should be simplified.

Focus on mainstreaming gender and special target groups – It is of the utmost importance to focus on gender as well as mainstreaming special target groups through improving legislation and programme intervention to bring these groups on to a level playing field with other groups.

Capacity building through training and awareness – Regular support to increase the capacity of the communities and the protected area staff is essential for the sustainability of the programme as well as of the buffer zone institutions. It is necessary to provide sufficient staff, maintain a database, strengthen the buffer-zone networking forum, and coordinate with relevant agencies to implement the buffer-zone programme.

Seek a sustainable source of funding – In most cases, adequate funding is always a problem. A sustainable source of funding for implementing new programmes and operating the system needs to be identified. Ecotourism should be encouraged in the protected areas and park-people partnerships forged with various stakeholders.

Conclusions and recommendations

Protected area management is now focused on meeting people's basic needs so that the pressure of resource use on parks and reserves decreases. The buffer-zone programme has made remarkable progress, particularly in natural resource conservation, social mobilisation and social capital generation, development of alternative energy, and human resource development at the community level.

The institutionalisation of different community-based organisations in buffer zones is a stepping stone towards empowering and involving people in resource management. Sharing revenue in the buffer zone is considered to be an important incentive to reduce

park-people conflicts and improve communities perception of protected areas. User group formation at settlement level is found to be very effective for enhancing social integration and encouraging a high level of participation.

The participatory decision-making process in buffer-zone institutions has made people more accountable to buffer-zone communities. Capital generation and mobilisation are key components of community development initiatives.

The following are strongly recommended for the sustainability of the institution and programme: improving buffer zone legislation, forging partnerships with all relevant partners, establishing sustainable funding sources, and strengthening the buffer-zone networking forum so that experiences can be shared among various stakeholders laterally and vertically. Furthermore, improving management capability by providing training to community and staff at all levels should be emphasised.

A spatial strategy should be adopted to promoting each protected area and developing a plan that is pro-poor, pro-women, and pro-special target groups. The handover process for community forests should be shortened and community forest laws should be amended to provide economic benefits to poor households and special target groups.

Finally, adequate conservation awareness and outreach programmes are essential. Skills training should be designed to meet the needs of the different target groups and to encourage local people to be custodians for conservation of resources.

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Annex 1: Protected areas established between 1970 and 1998

Protected Area	Area (sq.km)		
	1970-1980	1981-1990	1991-1998
Annapurna Conservation Area		2600	7629
Dhorpatan Hunting Reserve		1325	1325
Kanchenjunga Conservation Area			2035
Khaptad National Park		225	225
Koshi Tappu Wildlife Reserve	175	175	175
Langtang National Park	1710	1710	2130
Makalu-Barun National Park			2330
Manaslu Conservation Area			1663
Parsa Wildlife Reserve		499	499
Rara National Park	106	106	106
Royal Bardia National Park	358	968	1355
Royal Chitwan National Park	932	932	1682
Royal Suklaphanta Wildlife Reserve	155	155	305
Sagarmatha National Park	1148	1148	1148
Shey Phoksund o National Park		3555	4904
Shivapuri Watershed and Wildlife Reserve		144	144
Total	**4584**	**13495**	**26758**

Source: DNPWC (2004)

Annex 2: Coverage of protected areas

Protected Area	Area (sq.km)	Year Declared	Buffer Zone (sq.km)	Year Declared
Annapurna Conservation Area	7629	1992	-	
Dhorpatan Hunting Reserve	1325	1987	-	
Kanchenjunga Conservation Area	2035	1997	-	
Khaptad National Park	225	1984	-	
Koshi Tappu Wildl ife Reserve (Ramsar Site, 1987)	175	1976	173	2004
Langtang National Park	1710	1976	420	1998
Makalu-Barun National Park	1500	1991	830	1999
Manaslu Conservation Area	1663	1998	-	
Parsa Wildlife Reserve	499	1984	298	2005
Rara National Park	106	1976	-	
Royal Bardia National Park	968	1976/88	328	1996
Royal Chitwan National Park (World Heritage Site, 1984)	932	1973	750	1996
Royal Suklaphanta Wildlife Reserve	305	1976	152	2004
Sagarmatha National Park (World Heritage Site, 1979)	1148	1976	275	2002
Shey-Phoksundo National Park	3555	1984	1349[a]	1998
Shivapuri National Park	144	1984/ 2002		
Sub-total	**23,872**		**4575**	
Total protected areas plus buffer zones = 28,447 sq.km				

[a original estimate of 449 sq.km still shown in some sources was later revised , ed.]
Source: DNPWC (2004)

Wetlands: an important source of livelihoods (Yunnan, China)
(see next page)

Analysis of Threats to Wetland Conservation and Local Livelihoods in NW Yunnan, China

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Abstract

The alpine lakes and wetlands in the mountains of south-west China in north-west Yunnan – one of 34 worldwide biodiversity hotspots – represent a unique but inadequately studied and protected aquatic ecosystem. Traditional communities, such as the Tibetans, the Naxi, and the Yi are the prominent groups, and they graze their livestock on the summer alpine mountain pastures where alpine lakes and wetlands are scattered from 2,400 to 4,000 masl or higher. Among these groups, the Tibetan and the Naxi regard many landscape features such as mountain peaks, lakes, and wetlands as sacred sites. The local communities' roles and interests in continuing to manage and have access to these areas are evident, their knowledge about managing natural resources and their cultural linkages with the landforms form the very foundations for local stewardship, as a contribution to maintaining the mosaic alpine ecosystems for the generations who live and will continue to live in north-west Yunnan. However new threats have emerged as a result of tourism projects and are posing problems not only for conserving the wetlands, but also for sustaining local communities' livelihoods. New policy tools and monitoring mechanisms need to be put in place to keep a close watch on wetland development.

Introduction

As a result of the continuous economic growth over the last 20 years, China has shifted rapidly from a centralised underdeveloped economy to a consumer-driven market economy. Fast economic growth in the market economy acts as a double-edged sword, however, it mobilises investment efficiently like a powerhouse for generating wealth, while, at the same time, it marginalises disadvantaged local communities and diverse natural resources which are common property and public goods.

Yunnan Province represents an economically less developed region in China, where rich natural resources and cultural diversity have long been mountain-locked. Now, however, it is facing an economic crisis and threats of unchecked investment as the result of the open-door economic policy and Greater Western Development Policy and Yunnan province's cry for greening Yunnan's economy[+]. Located in Southwest China, bordering

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[+] The Greater Western Development Strategy covers the following provinces: Sichuan, Guizhou, Yunnan, Shaanxi, Qinghai, Gansu, Ningxia, Inner Mongolia, Guangxi Zhuang Autonomous Region, Tibet Autonomous Region, Xiangjiang, and the municipality of Choqing. These areas constitute half of China's total area and are home to 25% of the population. The Strategy strongly stresses the significance of improved infrastructure, such as transport, telecommunications, oil pipelines, energy, and water control, as well as environmental protection and ecological restoration of the major river systems. Apart from the direct financial support of the central government, it also advocates private sector/initiatives in better-off regions, typically from the coastal areas as well as from overseas, to invest in the western region. According to the People's Daily, a major government newspaper, in 2000 the central government invested a total of 70 billion yuan in the Western Region in addition to 96.2 billion yuan on large-scale infrastructure project. In 2001, the total investment reached 300 billion yuan (www.people.com.cn/GB/jinji/222/2228/3106/20010808/530672.html). In line with the Strategy, Yunnan provincial government has developed a new set of strategies with two focuses – biological resources and cultural resources – both contributing jointly to the goals of building Yunnan as 'A Strong Province with a Green Economy' and 'A Great Province of Cultural Industry.'

Myanmar, Laos, and Vietnam, Yunnan covers 4.1% of China's total area and serves as the upstream region for several major international river systems that branch out south-eastwards through the Southeast Asian countries. These are the Salween (Nu) River, which flows between the Gaoligong and the Nu mountains, the Mekong (Lancang) River, between the Nu and the Yuling ranges, and the Yangtze River to the east of the Mekong. Northwest (NW) Yunnan, covering 15 counties and home to 14 ethnic groups, is squeezed by the Hengduan Mountain ranges hosting the upper stream watersheds of all the above-mentioned rivers and is facing an unprecedented dilemma between resource-based economic development and nature conservation. On the one hand, the government cry for modernisation in the official interpretation of the Shangri-la of commercial dreams has prompted waves of private investment in mining, tourism, and dams; and on the other hand, more and more international conservation organisations, such as the World Wildlife Fund (WWF), The Nature Conservancy, and Conservation International are present in the region, appealing on the need for biodiversity conservation. The clashes, in both ideological and practical terms, are evident and heated.

While efforts to conserve biodiversity in the eastern Himalayan mountain regions have increased rapidly, the attention given to alpine wetlands and lakes that feed into rivers and sustain local livelihoods along the Tibetan Plateau is static. This paper hopes to provide a rapid assessment of the conflicts and tensions caused by overheated development around selected alpine wetlands and lakes in NW Yunnan, and to provide a list of recommendations.

The context of wetland policy

The Millennium Ecosystem Assessment reports what wetland scientists and conservationists have feared – that wetlands are the most threatened ecosystems on the planet. The drainage of wetlands for conversion to other land types, the drying out of wetlands through diversion of water, the overexploitation and pollution of wetlands, and the influence of invasive species are the major threats. The status of wetlands in China confirms this alarming status: the deterioration of wetland health not only puts ecosystem safety in China in great doubt, but also has adverse effects on many South East Asian countries through the channels of regional rivers.

China was among the very first signatories to the international treaty on the Convention on Biodiversity. In 1992, China joined the Ramsar Convention. The Chinese government has since then tripled its number of wetlands of international importance by designating a great number of provincial and national nature reserves to the Ramsar List. In early 2005, another nine sites, of which four are from Yunnan, were added to China's Ramsar Site list, making 30 Ramsar Sites in all with a total surface area of almost three million hectares. As a result, China's designated wetland protected areas now account for nearly 10% of such sites world-wide, ranking first in Asia, and fourth globally. In total, China has identified 262 wetland areas covering 16 million ha with varied protection status, among which the forestry system alone is charged to manage 145 protected areas covering 11 million ha. According to a recent report and much to the credit of the State Forest Bureau, China's wetland resource inventory was completed after five years of hard work, and subsequently the national programme for wetlands' conservation and ten-year action plan were formulated.

Yunnan lies in the southwestern mountain biodiversity hotspot, the Hengduan Mountain Ecosystem of the Greater Eastern Himalayan zone. It hosts a large number of wetlands

and upland lakes that are home to many wide-ranging migratory and endemic bird species as well as freshwater fish species, amphibians, and reptiles sensitive to ecosystemic changes. Some of these are extremely endangered due to deterioration of habitat quality as a result of intensified human use. There are four major snow and glacier mountains in NW Yunnan: the Yulong (5,596m), the Haba (5,396m), the Baimaxueshan (5,430 m), and the Kawagabo (6,740 m), ranging from N27°-29°. The wetlands and alpine lakes are heavily concentrated between these four mountain ranges. The alpine aquatic ecosystems in this region, which include alpine wetlands, lakes, and rivers, are believed to be a) rich in biodiversity and high in species' endemism; b) important water sources for regional river systems and watersheds for China as well as the South East Asian countries; c) critical to local communities' livelihoods and cultures; and d) integral ecosystem units for alpine and low latitude glaciers instrumental to global climate change studies.

According to Wetland International, Yunnan Province has abundant wetland resources, including 134 bird species and 382 fish species. The number of black-necked cranes (*Grus nigricollis*) wintering in Eastern Yunnan exceeds 1,500. There are several tens of thousands of wintering water birds in wetlands located in western and north-western Yunnan. Most swamps in Yunnan Province are of the alpine type, and thus of great value for conservation. The lakes and swamps of Yunnan Province are the upper reaches of great rivers and the conservation of biodiversity in these river basins is of international importance. With the rapid increase in resource-based development projects, aquatic ecosystems in southwest China upland are under intense pressure. Many places have experienced scarcity of water resources, water pollution, the halt of water flow, wetlands' shrinkage due to agricultural land conversion, overgrazing, competing tourism land uses, mining, and badly designed and implemented flood control measures.

In February 2004, the China State Forestry Bureau, WWF, the Ramsar Convention Bureau, and ICIMOD jointly hosted an International Conference on Himalayan Alpine Wetland Conservation and Development. The conference pointed out that 50% of the Eastern Himalayan alpine wetlands are within China's boundary, but efforts and resource allocation to conserve the nearly 75,000 sq.km of alpine wetlands are insufficient. The case of wetland conservation in Yunnan serves as a reality check for alpine wetland conservation in the eastern Himalayan region.

Table 1 summarises the Chinese government agencies with wetland conservation mandates. The Annex briefly captures the bulk of Chinese legal and regulatory systems relevant to wetland conservation (Liu and Li 2002).

A brief assessment of regulatory systems and institutions is provided in the following (see the Annex for an inventory of related laws)

1. Wetlands and aquatic ecosystem conservation is a new area in government commitment to environmental protection and biodiversity conservation. Most laws and regulations were issued in the 80s and started to take effect towards the end of the 90s in the last century. However, most of these laws have not taken into account new drives and threats as a result of the market economy and the growing forces of the private sector.
2. There is no single legislation specifically issued to look at the coordination and conservation of wetland. Wetland is mentioned only sporadically and, at times, in rather ambiguous language in other laws and regulations. Efforts to conserve

Table 1: Summary of government agencies with wetland conservation mandates	
Government Agency (including line offices and bureaus from central to county levels)	**Roles and Functions**
State Forestry Bureau	Coordinate and lead the major efforts towards designation, implementation, and management of wetland-related protected areas and compliance with the international treaty on wetland conservation
Ministry of Agriculture	Management of interfaces between agricultural land and wetland, conversion from one to the other; as well as oceanic fishery resources
Ministry of Water Resources	Coordination of uses of water resources
Ministry of Land Resources (including the State Oceanic Bureau)	Design, compile, and implement state land-resource strategies, general land-use planning, and oceanic resource management
State Environmental Protection Agency	Monitor status and processes of wetland conservation nation-wide

wetland are still opportunistic and reactionary. There is no nation-wide conservation strategy that involves all the above-mentioned agencies in a holistic and concerted manner.

3. Current wetland conservation efforts are primarily concentrated in northeastern China, the eastern coast area, and the middle to downstream reaches of the Yangtze River. The upland wetlands on the Yunnan-Guizhou Plateau and the Qinghai-Tibetan Plateau in the vast regions of northwestern and southwestern China have received inadequate attention, let alone developing a sound scientific understanding or implementing in-depth studies of the wetlands in these areas.

Concepts

In the Chinese western regions, where many ethnic groups have traditionally accessed natural resources on which their livelihoods depend, there are demonstrable linkages between the management of common property resources and sustainable livelihoods. Therefore, strong local stewardship in managing the vertically distributed natural resources in agro-pastoralist mountain ecosystems is the foundation for both sustainable livelihoods and biodiversity conservation.

Local stewardship in the sustainable management of natural resources is indispensable in clarifying property rights with the state, in recognising communities' customary access to state property resources, such as alpine pasture, and in sharing benefits fairly through transparent and participatory decision-making. While property rights have to be clearly defined in legal terms and demarcated on land, new stakeholders, such as emerging private investors, have to be encouraged by law to show respect to such location-based relationships between human beings and nature. This means that rights and mandated legal procedures to practice such rights have to be given to farmers; and these can include village elections introduced by the Organic Law and the Four Rights: namely, right to information, right to participation, right to make decisions on, and right to monitor affairs vital to farmers' collective interests. The increasing economic gap between the eastern and western regions, rural and urban, the problems of farmers, of villages, and of agriculture ('san nong wen ti'*) are becoming prominent concerns for social stability and social equity. Policies issued to

mediate such tensions come as opportunities when working with communities, government agencies, and private investors.

Tourism development in NW Yunnan, combining nature tourism and ethnic tourism, is still lacking alternatives or new initiatives to attract mass tourism. There is sufficient evidence about the current tourism market to show that mass tourism has delivered limited and monolithic tourism products and services, and its market-driven investment model has resulted in minimum benefits trickling down to grass-roots' communities, and at the same time it has degraded the environment. Whereas unchecked investment and planning procedures should be subjected to closer public and government reviews, a new approach that has been applied elsewhere should be tested; i.e., pro-poor tourism.

As defined by the 'Strategies for Pro-Poor Tourism' paper (Ashley et al. 2001)**,** pro-poor tourism increases the demand for goods and services from the poor; reduces the costs paid by them for their basic needs; increases the asset base of poor people; decreases local vulnerability and risk; and results in increased government revenues that positively reinforce local development goals. Pro-poor tourism differs from mass, externally-operated and managed tourism in a number of ways. First, the purpose is not exclusively economic growth and amassing foreign exchange, but rather improving the local quality of life by providing a secure and tenable economic base through direct local results. Unlike supply-side economic development policies, which focus on greater corporate investment with the hopes that prosperity at the top will trickle down to the poor, pro-poor tourism seeks to redistribute wealth directly to the communities in need.

Four major actors are involved in constructing a pro-poor tourism policy in developing countries, and each serves in a different capacity depending on the strategy employed. Whereas the initiative may be led by a national agency or even an outside private firm, rather than being conceived and developed exclusively at the local level, the key is that local communities must have a direct role in managing the project. The national or provincial government plays either a leading role in top-down projects, or a supportive role in bottom-up initiatives. The second major actor in pro-poor tourism projects is the private sector. While the private sector is necessary to provide product development ideas, marketing services, local investment, and, to a limited extent, operations, it should be accountable to local communities rather than an exploitative actor.

Local non-government organisations (NGOs) and international development agencies also serve crucial roles as protectors of local cultures and the local environment, and as developers of small-scale sustainable development projects such as eco-tourism. Local communities themselves are the most integral component in developing pro-poor tourism programmes. The people are producers, employees, labourers, and operators of micro-enterprises. Communities are most effective when led by community organisations that have the legal and institutional capacities to manage local resource development, negotiate with private firms, work with the government, and receive and distribute collective income. When investors violate rights, the means to defend environmental justice are important for the benefit of the communities and their

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* The term 'san nong wen ti' stands for deep-rooted, prevailing rural epidemiological problems, symptomatic of farmers' losing land to agro-business ventures, rights' violations, dwindling incomes, insufficient incentives to produce grain, and a static or depressing rural situation. This has caused great discontent among rural and urban people in many parts of China. Since 2001, the State government has attached greater significance to mediating such tense and worrisome situations in rural China. Yet efforts remain to be seen to distinguish between northern rural settings, where commercial grain

environment. Last but not least, effective local community management requires a conducive legal and institutional environment, a focus on local activities rather than resorts, and the development of locally-produced goods for sale rather than those that are externally-produced.

Study Methods and Findings

The assumptions in the study followed two paths: a) whether and how wetland management is having an obvious impact on land-use practice, and b) how land-use changes are a result of policy shifts or how new practices are influencing wetland conservation and other related agenda.

Altogether five sites were selected: four of them are Ramsar sites listed in 2005 – Napa Lake, Bita Lake, Lashi Lake, and Da Shanbao and the fifth, Qianhushan, is within the core zone of the Three Parallel Rivers' Protected Area and World Natural Heritage Site. Due to its wide distribution, high latitude, and the fact that it is a relative latecomer for tourism, Qianhushan remains the least affected and most pristine wetland and lake area of the five. Even scientific communities have not frequented the area enough to make a full report. In short, these five sites give a good idea of the wetland situation in Yunnan (Table 2).

Unlike most materials available on websites or obtained through protected area management systems, it appears that conflicts and tension around wetlands, particularly those listed as Ramsar sites, are not documented and reported. This author's personal communication with the Protected Area Management Division of the Yunnan Provincial Forest Bureau has confirmed that a wetland inventory for Yunnan has yet to be compiled due to lack of resources. This study therefore tries to provide a rapid assessment of local livelihoods, policies, tenure, and resource conflicts and critical issues pending for timely research or action.

Methods

This paper is based on the ongoing project activities in Jisha village in which the Centre for Biodiversity and Indigenous Knowledge started a community-based conservation and development project about five years ago. At different points in time, travelling to and from the project sites required frequent travel through NW Yunnan. Alpine wetland had been one of the concerns in Qianhushan and Jisha village, thus development issues concerning the wetland in NW Yunnan in general gradually came into focus.

Participatory rural appraisal and participatory observations were used to gather information regarding indigenous knowledge about grazing, forest management, sacred land practices, and cultural and productive handicrafts and resource mapping. Open-ended questionnaires were used to investigate village elections. Open-ended interviews were used in group meetings and individual households to understand various issues regarding resource allocation, management, festival preparation, and labour arrangements during guesthouse construction. Stakeholder analysis, consensus-building, and conflict management were carried out many times. Secondary information was referenced.

Findings and analysis

The Great Western Development Strategy has created a de facto open license for an unchecked private sector to exploit natural resources in the western provinces. The

Table 2: Brief survey of the five study sites

Name of Wetland	Location and characteristics	Local livelihoods	Local Policies	Tenure and Resource Conflicts	Critical Issues
La Shi Lake	1,002 ha Lijiang Prefecture 150,000 birds, 31 1st and 2nd rank protected species. Ramsar Site in 2005	1,800 local Naxi farmers living immediately around the lake are surviving on fishing and seasonally flooded agricultural land	- Enforcing wetland conservation: prohibition of fishing and hunting birds - Conversion of agricultural land to a 'birds' habitat with limited compensation to farmers - Tourism development: priority given to water supplies to ancient water town of Lijiang, as a result a dam was constructed on the wetland to reserve water, submerging farmlands around the lake	- Fishing rights limited due to bird conservation - Loss of agricultural land and fish catches to tourism downstream by means of water diversion project	- Conflicts profiled as 'wars between local people and birds' - Conflicts between conservation and tourism development, resource appropriation - Fair compensation and transparent decision-making on watershed management
Napa Lake	2,400ha Black-necked crane and six other kinds of 1st rank birds and 18 pheasants wintering. Recently significant increase in black-necked cranes wintering: 245 individuals observed in 2004 Ramsar Site in 2005	14 villages, 565 households, and 3,265 farmers living around the wetland; ranching on the wetlands has been a significant means of livelihood	- Protection of black-necked crane - City sewage drains into the wetland - Enlargement due to fear of flooding caused wetland to dry out and vicious cycles ensued - Monopoly concession to tourism investors - Engaging local farmers to give up sand harvesting for other alternatives	- Local farmers harvest sand from around the wetland to sell in the town as construction materials - Tourism concession monopoly and exclusion of local farmers - Tourism use, livestock use, and wildlife use of the wetland cause heated tensions	- Acute tensions between monopoly concessionaire and excluded villages - Acute tensions between excluded villagers and tourists - Bloodshed fights amongst villages who are for or against monopoly - Plan for Napa Lake management jeopardised and compromised - Opportunities for co-management for conservation and pro-poor tourism missed
Bita Lake	2,000 ha Zhongdian county of Diqin, Tibet Autonomous Prefecture Alpine lake, meadows, Diptychus Steindachner black-necked crane, and temperate needle forest ecosystem Ramsar Site in 2005	- Customary access of summer alpine rangeland; - Spiritual sites,	- Protection of Bita Protected Area - Tourism activities implemented by county tourism bureau and Bita Protected Area authority - Delivery of improved horse track on grassland - Tourism concession rights to outsiders to run boating business - Local communities participate in horse track business	- Access to traditional rangeland reduced and controlled by authority - Concessionaires took long-term rangeland use rights from farmers through unfair deals - Conflicts between villages over horse track business distribution	- Balance between local livelihoods and tourism development - Balance between tourism and wetland conservation - Lack of sound protected area management plan - Lack of sound scientific understanding of lake systems and species in it

cont.

Table 2 cont.

Name of Wetland	Location and characteristics	Local livelihoods	Local Policies	Tenure and Resource Conflicts	Critical Issues
Qianhushan	39,630 ha Highest concentration of alpine wetland and lakes above 3,400 masl in Yunnan One of the eight core zones of the Three Parallel Rivers' Protected Area and World Natural Heritage Site Over 70 lakes and wetlands within Jisha's pastures, 17 of >1 ha, the largest around 23 ha. (Many more alpine lakes and wetlands outside Jisha's pastures.)	- Over 2,000 Tibetan villagers, including 400 Jisha villagers, depend on Qianhushan their annual access to summer alpine grazing. - Cultural and spiritual sites - Traditional pastures of Jisha village occupy a bout 7,425 ha, forest is predominant, covering 60% of the total area. 12 summer grazing sites have been used by Tibetan herders for generations eve ry year between May and October; t he pasture areas cover 1,412.5 ha in total, accounting for 20% of the land area of Jisha.	- One of the eight zones of the Three Parallel Rivers' Worl d Heritage Site, Protected Area and National Scenic Area - Major mass tourism development depending upon outside private investment	- Customary access to grazing within state forest - Spiritual access to sacred mountain and lake in state forest - Unclear demarcation between state and collective forest and grassland - Collective land with no property license - Dubious development plan and land-use appropriation	- Lack of balance between long-term local farmers' livelihoods' needs for resources and short -term investment needs for resources - Lack of transparent and scientific understanding of investment impact on biodiversity and wetland - Lack of local farmers' participation in major decision-making processes and fair benefit-sharing
Da Shanbao	3,000 ha Zhaotong County, NE Yunnan Important wintering site, wetland and swamp sub-alpine ecosystem Ramsar Site in 2005	Over 20,000 farmers living within the black-necked crane's wetland habitats They treat the birds as sacred and feed them with co rn.	- Fix and stabilise the holding of agricultural land - Natural forest protection and upland conversion to forest and grassland - Building reservoirs to safeguard sufficient water storage in order to restore swamp and wetland - Resettle over 3,000 farm ers in nearly 800 households from the core zone	- Land-use comprised by local livelihoods for protected areas	- Balance between conservation and local livelihoods - Restoration of forest land undesirable for crane habitat

interaction between forest policies and land use patterns in asia

mountain ecosystem and local communities are particularly vulnerable. There is little evidence that current wetland conservation has any significant impact on land uses, except in Da Shanbao where wasteland or agricultural land were forested as a good intention to restore habitat for the black-necked crane. The remaining four cases have provided strong evidence that private investment in tourism programmes will have a deep-seated negative impact on wetland conservation; and will create heated conflicts with communities and jeopardise their means of livelihood. Lack of adequate attention to the following issues has posed serious threats to wetland conservation at the selected sites.

Inappropriate penetration of the private sector
In all of these five cases, almost without exception, there is a differing degree of private-sector involvement in tourism-related business ventures within the proximity of wetland conservation areas. In the worst case, physical fighting occurred between groups of people as conflicts intensified. The private sector is by no means an enemy to nature and communities, yet the current practices have resulted in appalling consequences. The private sector is harmful if a) government agencies become allies of the tourism company and at the same time belittle communities' rights and interests; b) privately initiated investment does not take into account local communities' needs for the very resources to be used as tourism capital; and c) laws are not effective in keeping the private sector accountable to environmental standards.

Problematic approval and planning procedures
Development plans that have the potential to affect world heritage, protected areas, or culturally sensitive areas must comply with sound principles and tight regulations. Approval procedures must be followed with the guidance of the appropriate authorities. In reality, however, development projects in Qianhushan did not follow proper procedures. In the absence of approval, investors can force government agencies to approve by making a de facto construction site. Fair and transparent assessments of environmental and socioeconomic impacts are either avoided or carried out to the advantage of the investor. Local government is supportive of the investor as investments are quantifiable indicators for evaluating an official's performance.

Pro-poor tourism remains lip service
Tourism plans mostly focus on sheer scale and numbers, ignoring the fact that local communities' livelihoods depend upon natural resources. Outside developers and local governments reap the main benefits; and local communities have been increasingly marginalised in terms of ownership of resources and sharing benefits from tourism activities, management skills, and the capacity to engage in the tourism industry. Examples from Bita Lake, Lashi Lake, Napa Lake, and Qianhushan all point to the need to include local communities for equitable benefit-sharing.

Village decision-making body has little impact on transparent resource governance
China's ambitious nation-wide village democracy programme created opportunities for grassroot level farmers to elect village committees and exercise local governance within a village administrative structure from 1998 onwards. In reality, the village committees have yet to learn to fully exercise their legitimate rights to manage their resources. The difficulty of the downward accountability of the village leadership structure to its village constituency is further compounded by heterogeneous community dynamics. Villagers themselves have great difficulties in exercising their collective decision-making power through the village authority, even though they elected it. Not knowing their rights, community members can be easily manipulated by investors. In Jisha's case,

villagers were cheated many times into signing deals detrimental to their long-term interests – such as losing their rights to summer alpine pasture and causing potential damage and disturbance to their sacred sites. With some village heads reportedly being bribed, the company hijacked the village decision-making body.

Conclusions and recommendations

The overall process of wetland conservation is still dominated by government. Despite farmers' legally defined rights and village governance authorities, great hurdles still remain in translating farmers' rights into planning, co-management of protected areas, equitable sharing of economic benefits, and protection of culturally significant land.

Government commitment to develop a regional strategy for wetland conservation in the Yunnan-Guizhou Plateau and Qinghai-Tibetan Plateau that promotes the integration of wetland conservation and sustainable livelihoods has yet to be seen. This should be realised through building a wide array of partnerships with scientific communities, law enforcement and legislative communities, local communities and development and aid organisations, the private sector, and government agencies to influence policies and to demonstrate the realisation of community-based livelihood benefits from wise use of the wetlands.

The following chart illustrates the factors critical for facilitating pro-poor tourism in the context of southwest China in order to ensure that equity and sustainability of livelihoods are adequately considered. In the future plan for an integrated wetland conservation programme, it is recommended that tourism demonstrate a strong pro-poor design.

In southwest China, it is not an unpopular view that policies and laws applicable to communities' sustainable livelihoods and biodiversity conservation – including wetland conservation – are contradictory and mutually exclusive. Until these two are perceived and approached holistically, efforts to combine the two to create a win-win scenario will remain a losing battle. The following are suggestions for further policy advocacy work.

1. A stronger and committed government mandate to link tourism development with community livelihoods as an important alternative to the mass tourism industry
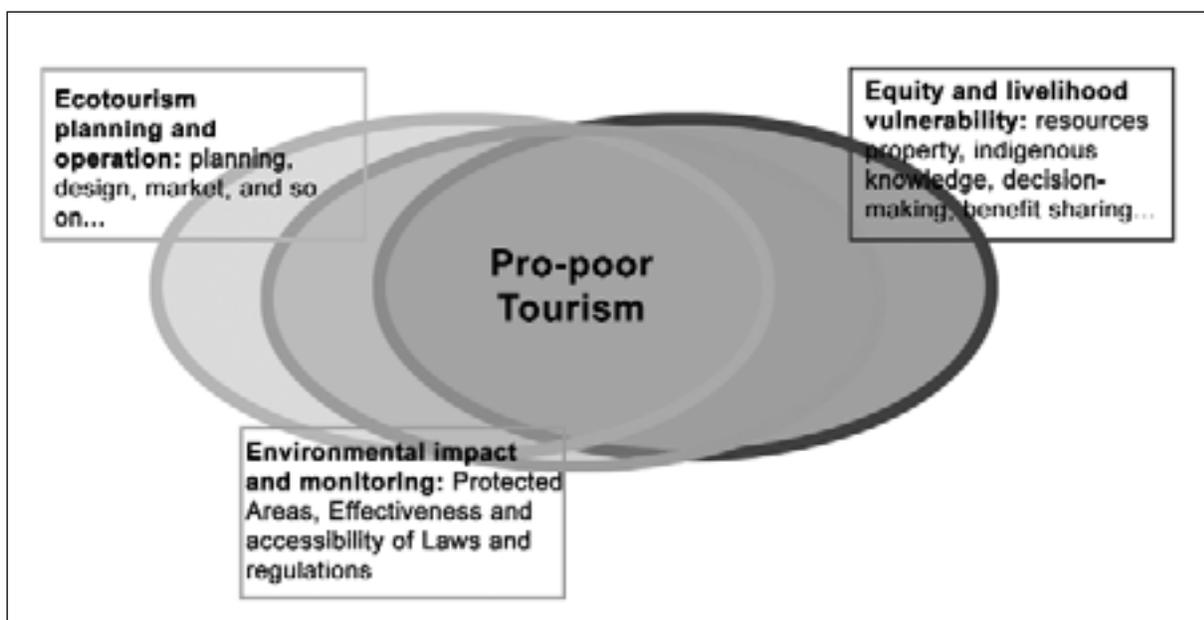

Figure 1: Factors critical for pro-poor tourism

2. Recognition in institutional and legal terms of the local community's roles and rights in natural resource management; including customary access to state resources
3. Designs for multi-stakeholder participatory planning of integrated wetland conservation should give special consideration to the specificities of communities' livelihoods and cultural meanings of resource management.
4. Easy access is needed to legal aid in resource conflicts; local communities urgently need more linkages and help to become better informed about laws and regulations; and state-sanctioned rights to information, participation, decision-making, and monitoring need to be realised.
5. Increased public participation and review of development plans

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Annex 1: Brief Review of Chinese Laws and Regulatory Commitment to Wetland Conservation

1. The following laws have shown varying relevance to wetland conservation.

Title of Law	Date
The Forest Act	1982
The Prevention of Water Pollution Act	1984
The Land-use Management Act	1986
The Law on Wildlife Protection	1988
The Water Act	1988
The Environmental Protection Act	1989
The Soil and Water Conservation Act	1991
The Gun Control Act	1996
The Oceanic Environment Protection Act	1999
The Organic Law	1998
The Agricultural Land Act	2002
Revision of Law on Water Resource Conservation	2002

2. The following administrative regulations are related to wetland protection.

Title of Regulation	Date
Scenic Area Management Regulations	1985
Regulations on Oil Survey and Exploration and Environmental Protection	1990
Regulations on Control of Ocean Pollution due to Shipping Spills	1990
Implementation Regulations on Terrestrial Wildlife Protection	1992
Implementation Regulations on Aquatic Wildlife Protection	1993
Regulations on Protection of Agricultural Land	1994
Regulations on Protected Areas Management	1994
Several 'Recommendations on Aquatic Ecosystem Conservation and Rehabilitation' issued by the Ministry of Water Resources circulated	2004

3. The following government commitments to conservation and sustainable development are rele vant to water conservation and wetland protection.

Title	Date
China's Agenda 21 – China's White Paper on Population, Environment, and Development	1994
China's Action Plan on Biodiversity Conservation	1994
Action Plan of the Ministry of Forestry – China's Agenda 21	1995

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