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Forestry and the Environment

Nepal Case Study

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FORESTRY AND THE ENVIRONMENT
NEPAL CASE STUDY

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by

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This Working Paper is one of a number of case studies prepared for CDIE's assessment of USAID Forestry and the Environment programs. As an interim report, it provides the data from which the assessment synthesis is drawn. Working Papers are not formally published and distributed, but interested readers can obtain a copy from the DISC.

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FOREWORD

USAID's Center for Development Information and Evaluation (CDIE) is currently conducting a global assessment of Agency's environmental programs. The assessment focuses on the environmental impact of USAID-supported activities in the areas of sustainable agriculture, forestry and biological diversity conservation through strengthening parks and protected area systems.

This field study which examines community forestry in Nepal is one of seven country case studies drawn from USAID's experience around the world. Improving forest management, forest cover, and ecosystem vitality not only on private but also on state or communally owned lands present different challenges in each of the countries chosen for this assessment. Nepal's experience with people oriented forestry programs is one of the longest and most comprehensive. The recent commitment to political decentralization has propelled fifteen years of progressively refined community forestry work to center stage in the country's rural development strategies. By turning over control of more than two thousand local forests and woodlands to community groups, the government hopes that secure access to needed fodder, timber, fuel, and water resources will lead to better management, increased production and well-being for the populations concerned. This evaluation examines the validity of that hypothesis by tracing the impact of USAID's support to the community forestry program.

Similar studies have been completed in the Philippines, Pakistan, Mali and the Gambia with work in Latin America remaining. The results of the seven case studies, all of which follow a similar analytic framework, will be synthesized into an overall assessment that summarizes lessons learned from a global perspective and highlights for USAID management the program implications of those lessons.

The team wishes to thank all those individuals who gave so generously of their time during the assessment. We feel privileged to have had the opportunity to meet with such knowledgeable and dedicated people. We hope that our efforts, in however small a way, assist them in ensuring that Nepal's treasures -- its people and its environment -- are shared for many generations to come.

GLOSSARY

ADB	Asian Development Bank
DFO	District Forest Officer
DOF	Department of Forests
DSCWM	Department of Soil Conservation & Watershed Mgt.
FINNIDA	Finnish International Development Agency
FDP	Forestry Development Project
FSCC	Forestry Sector Coordinating Committee
GON	Government of Nepal
IOFP	Institute of Forestry Project
NAFP	Nepal Australia Forestry Project
NCRP	National Coppice Reforestation Project
NGO	Non Governmental Organization
NPC	National Planning Commission
NRMP	Natural Resource Management Project (Mustang)
MFSC	Ministry of Forests and Soil Conservation
MPFS	Master Plan Forestry Sector
PVO	Private Voluntary Organization
RABNP	Remote Area Basic Needs Project (Solukumbu)
Rapti	Rapti Integrated Rural Development Project
RCUP	Resource Conservation and Utilization Project
UMN/NRMP	United Missions to Nepal/Natural Resource Management Project
USAID	United States Agency for International Development
VDC	Village Development Committee

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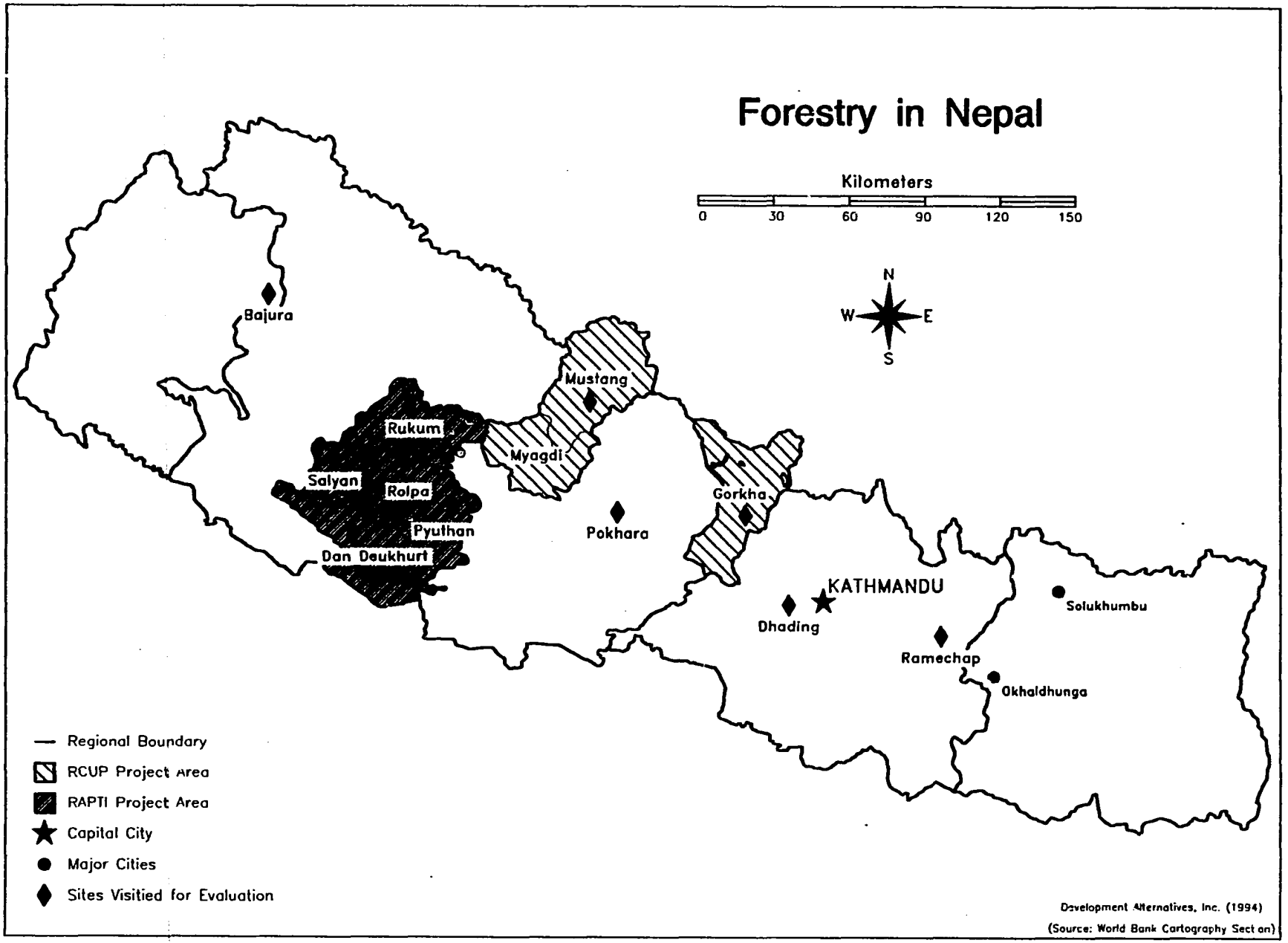
Forestry in Nepal
Kilometers
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Bajura
Mustang
Rukum
Myagdi
Salyan
Rolpa
Pyuthan
Dan Deukhurt
Pokhara
Gorkha
KATHMANDU
Dhading
Ramechap
Solukhumbu
Okhaldhunga
Regional Boundary
RCUP Project Area
RAPTI Project Area
Capital City
Major Cities
Sites Visitied for Evaluation
Development Alternatives, Inc. (1994)
(Source: World Bank Cartography Section)

1. INTRODUCTION

In November-December 1993, a six person team of specialists carried out an impact assessment of USAID's support to community forestry in Nepal. This assessment was to identify USAID-supported approaches since the late 1970s which have promoted environmentally sound forest management in Nepal. Most such assistance targets the country's community forestry program. Community forestry in Nepal entails turning over management responsibility and use rights for state-owned forests to local groups who receive technical assistance from the forest service, projects and non-governmental organizations. A related secondary USAID objective in the forestry sector is to encourage private forestry by eliminating GON control over such areas as pricing, cutting, and transporting of forest products.

The scope of this evaluation is limited to Nepal's community forestry program and the changes it has introduced at four levels: policy, program implementation, management practices, and biophysical conditions. CDIE's analytical methodology sought to identify linkages between changes in forest policy -- and in the implementation of that policy through technology, institutional, and education/awareness strategies -- and changes in the practices of resources users at the field level that affect long term socio-economic and biophysical conditions. A detailed discussion of the methodology can be found in Appendix A.

This report distinguishes the specific contributions of the USAID funded activities to the overall community forestry program, presents evidence of their impacts and makes judgements about present and likely future performance. Following this introduction, Section 2 provides an overview of the challenges facing the community forestry program and relevant background information concerning the various USAID projects and other actions which have contributed to the program's development. Sections 3, 4, and 5 contain the principal evaluation findings concerning respectively, program implementation, program impact and program performance. The sixth and seventh sections identify outstanding issues and highlight lessons learned of relevance to the Agency's overall program of support to environmentally sound forestry. The study's results contribute to a multi-case analysis of the Agency's assistance to recipient countries to safeguard their natural resources through improved forest management.

2. BACKGROUND

The Problem

Landlocked and mountainous, Nepal emerged from relative isolation only in the early 1950s and has since embarked on a series of broad-based development programs supported by increasing flows of external assistance. By most accounts, the country's economic growth has lagged that of the surrounding economies of Southern and Southeast Asia. As a recent World Bank report reviewing twenty-five years of natural resource management in Nepal notes, the country's development policies have largely been ineffective, economic growth has declined and poverty, especially in rural areas, remains pervasive (World Bank 1992). In 1988, for example, Nepal's per capita income was approximately $180, little higher (in real dollar terms) than in 1961. However, a more rapid, approximately 30 percent increase in GNP during the 1980s indicates growth may be accelerating (Cohen 1991).

The poor performance of Nepal's development policies is tied to a number of factors: 1) Nepal remains at an early stage of development and its management and administrative systems are extremely weak; 2) the soil is unstable, so erosion is severe; 3) the country's geography and lack of infrastructure makes transport, communications and marketing difficult; 4) Nepal's economy is dominated by agriculture, which accounts for 90 percent of employment and 60 percent of gross domestic product, thereby limiting the options for economic diversification; and 5) population is growing rapidly, by 2.7 percent a year. For these reasons, safeguarding sustainable production from the country's forests remains a high development priority.

The country can be divided into three major zones: the Terai and Inner Terai, the Middle Hills, and the high mountains and inner valleys. The mid-hills receive the major thrust of the community forestry program, including the bulk of USAID funding. While the zone's rural population is comparatively poor, successful development of the mid-hills is critical to the country's future. The region's forest resources, while not as immediately accessible of those of the Terai, may be more easily managed on a sustainable basis. Their economic importance should not be underestimated. The hillsides and valleys of this upland region are home to approximately half of the country's non-urban population and offer many unique agro-ecological niches. Intensification and increasing commercialization of the subsistence production systems in these ridge-valley complexes, already becoming widespread, must continue if the hills are to complement the industry and larger scale forestry and agriculture of the Terai and the tourism, merchant trade, and extensive livestock production of the high mountains. The Middle Hills are important, therefore, not only for their economic contribution but also for their service to a national economy whose growth prospects in other areas depend on the mid-hills serving as a socially stable, democratic and productive base for a large segment of the country's population.

Nepal's rapid population growth, poverty and lack of economic alternatives to largely subsistence agriculture have placed increasing pressure on the country's forest resources. Three decades of unrestricted use of nationalized hill forests led to their steady degradation. From 1964 to 1978 alone, an estimated 25% reduction occurred in the crown cover of Nepal's hill forest (Wallace, 1988). This decline in forest quality has resulted in increased hardship for the majority of the population that relies on forested lands to meet cash and subsistence needs.

Deforestation has been shown to adversely affect agricultural production, food consumption and nutrition because of the additional work required to collect essential forest products, primarily fuelwood, fodder and grass (Kumar and Hotchkiss, 1988). The workload of women, in particular, increases as deforestation expands, and this burden inevitably reduces the overall labor inputs a household has available for agricultural production. As a result, a women's reduced availability for agricultural labor, compounded by a low capacity for substitution between men's and women's labor, can lead to a much larger overall decline in labor inputs to agriculture with deforestation.

Natural resource management in Nepal has revolved around conserving land, forest and water resources to maintain their ecological functions while intensifying agriculture and forestry production. Significant losses and damage to forest cover and topsoil underscore the inadequacy of previous trends and the urgency for developing practical resource conservation measures.

In the late 1970s, the Government of Nepal (GON) became concerned with the clearing of extensive tracts of forests for agricultural activity and the overcutting and overgrazing of forests and shrubland adjacent to farming areas. In many localities, the forest cover necessary to maintain ecological balance had either been destroyed or been degraded to the point where natural regeneration was not occurring. Moreover, it also became clear that the state alone was unable or unwilling to enforce forest protection laws. The GON began to take steps to reverse the trend by seeking donor funding to support reforestation and resource conservation projects and by addressing related policy issues. By 1988, a master plan had been adopted that included twelve separate programs including, among the most prominent, the community forestry program.

The community forestry program in Nepal responded to the country's need to reverse forest degradation. It benefits from the lessons learned through successive experiments with evolving models of forestry development. USAID assistance programs, as well as other donor supported programs, have helped the GON in the conceptual development of the program and in experimenting with models of community forestry implementation (see Text Boxes 1 and 2).

Nepal's program in community forestry followed a twenty year period in which the Department of Forests (DOF) within the Ministry of Forests and Soil Conservation (MFSC) officially assumed absolute responsibility for the protection and management of all forest lands. In 1957, the Government of Nepal nationalized all forested lands. One reason for forest nationalization was to remove ownership over vast stretches of valuable forests from a few wealthy, mostly Rana, land owners. The nationalization program brought all forest resources into government ownership, ostensibly so that those resources could benefit the country as a whole.

Most time, interest, and investment was directed to regions such as the Terai where private and public revenues could be generated, and done usually without respect for efficiency and sustainability. In more accessible areas, policing, not extension, was the norm. In fact, protection and management responsibility for the nation's forests was vested in an understaffed and poorly equipped DOF. The character of Nepal's hill landscape, with forest patches surrounded by private agricultural land and dwellings clustered in villages, when combined with a lack of roads made protection and management of these forests infeasible. Encroachment, unrestricted harvest and a lack of effective enforcement led to a decline in forest quality. In effect, large areas went form being "managed" by local communities to being "unmanaged" by the DOF. This decline in quality (and in the Terai region a significant reduction in forest area) and a growing global concern over deforestation forced a re-evaluation of Nepal's forest management approach.

Community Forestry Policy Development

In 1977, after twenty years of experience with a model of state protection, Forest Act 2018 (1961) was amended to provide for people's participation in forest protection and management. This legislation provided the legal basis for establishing community managed forest lands (Panchayat forests and Panchayat Protected Forests), leasehold forests and private forests. Although this 1977 amendment provided the legal foundation for community forestry, the mechanisms for implementing the policy and the bureaucratic motivation to implement the policy required another 15 years to develop.

The new forestry legislation, Forest Act 2050 (1993) gives legal standing to "forest user groups" and provides a legal basis for the harvesting and sale of surplus products from community forest lands. Nepal's community forestry program embodies a progressive and visionary approach to natural resource management.

========== begin text box ==========

Box 1. Community Forestry in Nepal

Nationalization of Nepal's forests in 1957 lead to an unanticipated breakdown in indigenous management systems. State ownership weakened existing controls and permitted a rapid decline in the quality of the forests and woodlands located near settled areas. The country's community forestry program embodies the formal response to what Metz (1991) estimated to be 30,000 scattered forest patches found throughout the country though primarily in the Middle Hills.

Community forestry in Nepal thus represents a strategy to recapture local community participation in an effort to expand and improve forest areas on marginal and degraded lands. The primary aim is to satisfy rural needs. The 1988 Master Plan for Forestry and the accompanying 1989 Forest Sector Policy redefine the forester's role as one of assisting and advising "people in their efforts to manage and utilize the forests on a sustained-yield basis...by promoting the establishment of permanent users groups as managers of the forest resource." Active participation in which users groups take initiative and assert authority distinguish the Nepal program from many village level reforestation activities including Nepal's own programs under the old Panchayat systems. Although the program does not transfer land ownership to the people, recent policy changes provide some assurance that the products and income from the forest will accrue to the members of active forest user groups. NGOs and development projects often assist resource users and government officials in the process of establishing community forestry activities. The major steps of Nepal's program can be summarized as follows:

User Group Formation. A group of villagers petitions the District Forest Office to "hand-over" a given forest for their management. DFOs respond by surveying the area for handing-over, determining the validity and representativeness of the user group, and registering the group. The User Group generally establishes a Management Committee.

Development of a Management Plan. Once established, the group, with the help of the DFO, develops and approves a management plan. Plans include provision for harvest and other uses, for the distribution of benefits, and for enforcement. Plans spell out the responsibilities and accountability of stakeholders.

Formal Hand-over. This involves preparation of a certificate by the DFO and approval by the Forest User Group.

Implementation of the Management Plan. This involves land improvements, protection and harvesting of forest products, administration and collection of fees and salaries, and maintenance

of relationships and conflict resolution between the various actors. It also involves review and revision of the plan.

========== end text box ==========

The program empowers resource users with the authority to make management decisions on their forest. Responsibility for protecting the forests is vested in the villagers who derive benefits from them, thereby fostering collective decision making and promoting equitability among caste groups as well as between male and female forest users.

The community forestry program builds on indigenous and traditional systems of forest protection and product distribution. Many forest patches had always been under systems of local management, and other new management systems largely resurrect previous management scenarios (Gil, ed. 1992). By involving members of multiple castes and women in its local organizations, the community forestry program runs counter to Nepalese hierarchical traditions and to a highly centralized bureaucracy. Implementing the program has been slow because of these cultural and bureaucratic constraints. Furthermore, forestry officials retain broad powers to suspend forestry groups and their activities.

Forestry Development in Nepal is guided by the twelve programs outlined in the Master Plan for the Forestry Sector (MPFS) (1988). The MPFS, with Asian Development Bank (ADB) support and Finnish International Development Agency (FINNIDA) guidance, with frequent input from USAID employees, was a three year effort by Nepal to set the stage for its future forestry development. The MPFS assessed the state of forestry development in Nepal and attempted to outline the countries needs for the future. Of 12 programs for Nepal's forestry development, MPFS clearly identified the community forestry program as the top priority for future development and donor funding.

Overall development activities in Nepal are officially coordinated by the National Planning Commission (NPC) through a series of national five year plans. The Eighth Plan (1992 - 1997) includes a forestry sector policy statement, that "Public participation will be intensified in the development of forestry through the implementation of private forestry, leasehold forestry and user group based community forestry programs." The plan sets the national targets of forming 5,000 user groups and the handing over of management authority on 252,000 ha. of national forest lands to those user groups. The five-year plans represent programmatic efforts to realize the goals and objectives set out in the MPFS.

USAID Assistance Approach

In 1951, soon after the fall of the Rana regime, the United States established a foreign assistance mission to support the new government of Nepal. Forestry sector development activities began in 1955, with a major contribution being the first inventory of Nepal's forest resources. With a 40 year track record of development activities in Nepal and with a large number of senior government officials having been educated in the United States, USAID has been in a prime position to influence forest policy development in Nepal (Skerry, Moran, and Calavan 1991). This influence is enhanced in the field by the large presence of Peace Corps in Nepal, resulting in a genuinely friendly attitude towards American forestry assistance felt by the Nepali people all the way to the village level. In its travels, the evaluation team was queried by villagers who wanted to know if any of the team members knew the Peace Corps volunteer who had lived in their village.

In forestry, USAID assistance has focused on developing the capability of the GON to implement its community forestry program. USAID agreed to support the Community and Private Forestry program through its work with the Rapti Integrated Rural Development (Rapti) project and through USAID support for NGO community forestry activities (UMN/NRMP and PVO co-financed projects). USAID also agreed to support the complementary Human Resources program through funding for the Institute of Forestry Project (IOFP) and to support resource information and planning assistance through the Forestry Development Project (FDP). Through these and other projects, USAID has worked to:

- develop and test local community approaches for forest management;
- foster policy dialogue leading to the legal framework and implementing policies for community forestry;
- strengthen the ability of government institutions, local institutions and private NGO's to facilitate the implementation of community forestry practices;
- assist in human resource development efforts that train manpower to extend community forestry, and
- increase production on community managed forest resources.

Specifically, these activities have been accomplished through the efforts of the USAID mission in Kathmandu and in the implementation of the following projects:

Resource Conservation and Utilization Project (RCUP)
367-0132 1980-1989 $27,498,000

Rapti Integrated Rural Development Project (Rapti project)
367-0129 1980-1988 $26,700,000
367-0155 1987-1995 $18,800,000
National Coppice Reforestation Project (NCRP)
367-0156 1986-1992 $2,280,000
Nepal Resource Management Project (UMN/NRMP)
367-0156 1989-1992 Combined remaining Coppice Reforestation funds with additional Forestry Initiative Project grant of $130,000
Institute of Forestry Project (IOFP)
367-0154 1987-1995 $8,700,000
Forestry Development Project (FDP)
367-0158 1989-1995 $8,00,000
PVO Co-financing
367-0144 1982-1988 4,150,000
PVO Co-financing II
367-0159 1987-1997 10,800,000

PVO Co-financed activities of:
Natural Resource Management Project (Care/Nepal- NRMP/Mustang)
Remote Area Basic Needs Project (Care/Nepal-RABNP/ Solukhumbu and Bajura)
Integrated Rural Development Project (Gorkha - Save the Children/USA)

Not all the funds obligated to these projects were destined for community forestry. From the available documentation, the team estimated $45 million in USAID funds had been allocated to the community forestry program and to policies and institutions bearing directly upon it. The RCUP and the Rapti projects both began in 1980, and were based on an USAID development assistance strategy (Bushen 1977) that followed the then widely accepted integrated rural development format. Both projects were therefor very large multi-sectoral efforts. Although natural resources (along with agriculture in the case of Rapti), was the lead sector, each recognized the complexity of the development process, and attempted to improve and integrate services delivered to hill farmers through GON line agencies. The later PVO implemented projects replicate the multisectoral approach but do so on a smaller more manageable scale.

RCUP was "the cadillac" of international development efforts in Nepal at that time. The project was developed by 94 local and international experts, and had a design cost of $ 1.2 million. Its objectives were to 1) assist GON in the protection and restoration of the soil, water, and plant resource base upon which the rural subsistence agriculture population is totally dependent and, 2) assist GON in developing institutional infrastructure to manage natural resources. The lead agency was the Department of Soil Conservation and Watershed Management (DSCWM) and there were 11 counterpart agencies in agriculture, irrigation, animal husbandry, forest management, range management, energy alternatives, watershed management, public health, and public works.

RCUP focused on two large river basin watersheds: the Kali Gandaki catchment in Mustang District (4000 km2) and the Daroundi catchment in Gorkha and Myagdi Districts (800 km2). The project addressed natural resource conservation on a broad front. New institutions were established to set policies and organize field programs. Major infrastructure development activities were undertaken, and funds were provided to Ministry of Forests and Soil Conservation (MFSC) to train senior managers and line agency staff. The project also helped develop the capability of Nepal's forestry training center, the Institute of Forestry, to provide a Bachelor of Science level education to meet the growing need for natural resource managers. Forestry activities employed a top-down model large scale reforestation of barren or highly degraded DOF administered lands.

RCUP, particularly in its final years, attempted a participatory approach to development, and targeted village panchayats as an appropriate level for implementing development activities. At the time panchayats were the most local unit of the monarchy's system of territorial administration. RCUP set up Catchment Conservation Committees in village panchayats to coordinate line agency activities and organize local participation in work projects. Working through the line agencies, planning was a top down activity, and village participation in development either entailed hiring villagers to work on centrally planned projects, or soliciting volunteer labor for projects that the planners were convinced would help the villagers. This approach was later shown to lack the sense of village ownership necessary to be truly participatory or sustainable.

Although originally planned with a 15 year life span, RCUP was terminated in 1989, at a time when the effectiveness of large multi-sectoral integrated rural development projects was subject to serious questioning.

The Rapti Integrated Rural Development Project was undertaken in the five districts of the Rapti zone, with the Ministry of Local Development as the lead agency. The project objectives were to: improve income, farm production, and other measurable quality of life indicators in the project area; and to increase local demand for, and control of, extension systems for agriculture, resource management, health, family planning, and education. Like RCUP, the Rapti project was a large integrated effort with 10 counterpart agencies delivering services in the areas of farming systems, rural works, institutional development, and employment and skills development.

Unlike RCUP, the Rapti project has been implemented for the entire 15 year design period, and is scheduled to be completed in 1995. Rapti benefitted from this long term commitment to development by being able to change its strategy in response to lessons learned in the field and in response to an emerging paradigm of

participatory management. In its "slimmed down" second phase, beginning in 1987, family planning, health, and education were dropped from the broadly encompassing Phase I project design. Rapti began to focus on increasing agricultural production through the introduction of cash cropping and on community forestry.

The Rapti project has been part of the "learning curve" on community forestry. Successful field activities have influenced national policies by serving as models for soil and water conservation and community forestry development (Napit and Yadav 1993). The project has also experimented with organizational structures for community forestry management, developed methods for preparing forest management plans and providing training for DOF personnel in community forestry extension techniques. In the time remaining in the life of the project, the technical assistance team is planning to expand its activities to assist established community forestry user groups to benefit economically in the harvest and utilization of forest products.

The $2.3 million National Coppice Reforestation Project began in 1987 in an effort to carry out research, demonstration, and training for improved production systems for fuelwood,fodder, and other products through the use of multi-purpose tree species. This was the last of the USAID funded forestry efforts that focused its attention on government managed forest lands. The activities were primarily focused in three Middle Hills research sites in the Dhading, Ramechap, and Sindhuli Districts. Coppicing experiments were carried out on exotic and indigenous tree species.

With the development of Nepal's community forestry program, USAID decided to curtail further NCRP research efforts and in 1991 reconstituted the project as the Forestry Initiatives Project, known locally as the Nepal Resource Management Project. Implementation was placed under the auspices of the United Missions to Nepal (UMN/NRMP). This move recognized the effectiveness of NGO's in implementing small scale integrated rural development projects and in facilitating the extension of community forestry. As such UMN/NRMP's outreach efforts serve as "proving ground" for the policy changes supported by the local USAID mission. This promising effort received additional support of $130,000 through the PVO Co-financing Project bringing the total to over $400,000.

The Institute of Forestry Project (IOFP) and the Forestry Development Project (FDP) both reflected commitments by USAID to support the implementation of the MPFS. The IOFP was also an extension of the successful efforts by RCUP to upgrade the education of natural resource professionals.

The $8.7 million IOFP started in 1989. The project built on an earlier cooperative effort involving RCUP, the World Bank, and the GON to establish the Institute of Forestry. The objective of the project was to strengthen the ability of graduates from the

Institute to practice community forestry. The project included components in curriculum design, faculty and staff training, commodities procurement and developing research skills. Following a 1991 mid-term evaluation, the IOFP focused on assisting the Institute in updating its curriculum to include classroom and field exercises that teach community forestry. The project also began working with the IOF and Tribhuvan University on reforms to foster institutional sustainability.

The $5.0 million Forestry Development Project (FDP) is an institutional strengthening project housed within the Planning Wing of the MFSC and designed to develop the planning functions of the Ministry. Initiated in 1989, the central objective of the FDP is to increase the productivity and sustainability of Nepal's forests through policy and institutional strengthening at the central level. It contributes to policy and legislative development to support the GON effort to turn over public forests to user groups.

Through the project, USAID has been influential in fostering legal reform as part of the Forestry Act 2050 (1993). FDP is also responsible for fostering coordination among donor activities in the forestry sector, and has provided a mechanism by which direct hire and foreign service national (FSN) staff from the USAID mission in Kathmandu have been able to influence the development of national policies affecting community forestry. Recently the project has begun assisting in district level planning within the DOF.

Using the mechanism of private voluntary organization (PVO) co-financing, USAID channels funds to a number of NGO project activities that combine a "bottom-up grass roots" approach to integrated rural development with community forestry extension. These projects place less importance on developing the ability of GON line agencies to deliver development services and more emphasis on initiating self help programs directly with village farmers. These PVO Co-Financed project activities have often been implemented in former RCUP project areas, and extended the technologies developed from RCUP and Rapti trials.

CARE/Nepal has two projects receiving USAID funding that have similar agendas. The Natural Resource Management Project is in Mustang district and the Remote Areas Basic Needs Project is in Bajura and Solokhumbu Districts. Each project works with the small watershed management model developed during the last two years of RCUP (terminated in 1989), and has a community forestry component. In a former RCUP site in Gorkha district, Save the Children/USA is receiving PVO Co-Financing funds to undertake similar programs.

========== begin box 2 ==========

Box 2
USAID and Support to Community Forestry in Nepal

While FDP and IOFP focussed on creating enabling conditions for the expansion of community forestry activities, many of USAID's other projects helped support experimentation, refinement, and diffusion of the basic community forestry model at the field level. This diverse experience with implementation has led to mostly small, but sometimes important variations on the theme.

The Resource Conservation and Utilization Project which ended in 1987 ultimately proved to be an expensive exploratory vehicle for seeking workable approaches to improving community based forest management. For the most part, the project was unable to transcend its top-down origins wherein portions of panchayat forest were fenced off and villagers were paid to reforest and subsequently guard limited plots here and there throughout the project area. In a few sites late in the project, the project pioneered a participatory approach through what were termed "village dialogues" with groups that were to become Watershed Conservation Committees. When the project ended, the new approach showed promise in giving local resource users more of a vested interest in the community forest the operation. When plans for a proposed phase two were dropped, it was left to other projects to put these late lessons to use.

The Rapti Rural Development Project proved to be the main vehicle for further promotion of community forestry. While starting similarly to RCUP, the Rapti Development Project distinguished itself by narrower focus emphasizing rural conservation, production, and marketing with more weight given to community organization efforts. The Rapti Project operates through private sector contract employees who essentially replace traditional government forestry and agricultural extension functions. Despite high staff to beneficiary ratios in project villages, budgetary analysis revealed that 88 percent of the 1990 Rapti forestry budget was devoted to "classic" seedling production (30.6%), plantation (40.9%), and protection activities (16.7%).

USAID's PVO-Co-Financing Project contributed to an increasing role of NGOs in the implementation of community forestry in Nepal. While the Department of Forestry retains administrative responsibility and ownership of the land, NGOs are increasingly recognized as catalysts between the government and the people especially in the earlier stages of the process outlined in Box 1. All of the NGOs financed by USAID follow a similar participatory approach in which beneficiaries make some demonstrable material contribution. Indeed, all community forestry, irrespective of funding source, follows the standard procedures set out in the

Master Plan for the Forestry Sector.

There are, however, important differences in the implementation. CARE's projects in Mustang, Solokhumbu, and Bajura all use village motivators residing in a remote village. These motivators are usually young women whose function it is to organize various village committees for sector in which the project is undertaking development actions. The approach produces a profusion of committees and sub-committees with an emphasis on work plan outputs. In contrast, UMN/NRMP puts greater emphasis on the processes of empowerment, especially of women and minorities, and local initiative through non-formal education and innovative awareness raising campaigns. Beneficiary contributions are higher, because project staff believe that commitment and sustainablility will be greater. The gorkha District program operated by Save the Children is distinguished by its strongly proactive stance with regard to women. All project activities are initiated first through women's groups which may later be expanded to include men.

========== **end box 2** ==========

Evaluation Procedures

The team based its findings on a careful review of USAID project documents, interviews with individuals knowledgeable about USAID-supported community forestry activities in Nepal, and field visits to 16 sites in eight districts. This permitted an assessment of impact from the perspectives of both project implementors' and intended beneficiaries. The data collection sought information on key technical, institutional, economic and social indicators of Nepal's community forestry program impact and performance. For each field site the team followed a common pattern of data collection and synthesis.

The team divided into sub-groups and focussed on separate aspects of the program. Site assessment forms were designed to carry out rapid appraisal of the biophysical characteristics of the forest in question. This enabled a better interpretation of responses garnered in a series of structured but informal interviews with project implementors and beneficiaries. Simple interview summary forms were adopted to facilitate data sharing among team members following the site visit and for subsequent reference. From these multiple sources of information, a site composite was assembled. The team then went through a consensus building exercise to evaluate the significance of the site in terms of the overall evaluation questions and performance criteria. Rank order forms were developed calibrate the team's cumulative observations and to permit cross-site comparisons. An illustrative sample record from one site at Dharna in the Rapti Zone is included in Appendix B.

3. EVALUATION FINDINGS: PROGRAM IMPLEMENTATION

The assessment design articulates four "cross-cutting" strategy areas where USAID directs resources to meet its objective of improved environmental conditions through better forest management in recipient countries. The following section highlights the important outcomes in each of these four strategy areas which have resulted from the USAID supported activities described above in section two.

Institutional Strengthening

The results observed under the first cross-cutting strategy, institutional strengthening, confirm and elucidate the assessment design assumption that effective institutional strengthening is that which facilitates the participation of all stakeholders in the process, in this case of building a community forestry program. Central planning and coordination, outreach and implementation, and local organizational capacity were all affected by USAID activities. As presented below, the evidence suggests that where a balance between these different organizational levels was achieved, enabling conditions were created that facilitated the adoption of the community forestry model.

USAID sponsored training activities have provided a critical input to creating an enhanced capacity within the Department of Forestry (DOF) staff to design, manage, and extend community forestry activities.

Training has been a major component of the USAID program in Nepal (see Table 1). Over the years USAID sponsored training activities have effectively built the administrative and technical capability of the Department of Forests (DOF). A large percentage of the senior members of the department received training in the United States. For example, two of the last three secretaries of the Ministry of Forests and Soil Conservation, Baban Prasad Kayastha and Manzoorul Haque, received their Masters degrees under USAID sponsorship.

These senior members of the forestry establishment have been key to the development of legislation that set the stage for community forestry development in Nepal. With the development of the community forestry program, USAID training began to focus on field implementation. Institute of Forestry faculty trained under RCUP and IOFP became the trainers at the Hetauda and Pokhara campuses for the new breed of forest officers and rangers needed to implement community forestry. While quantification of the impact of the training program was beyond this evaluation's scope, of more than a dozen field staff interviewed, all stated that these new foresters and rangers were more effective in working with villagers

and implementing community forestry than those trained earlier or elsewhere.

TABLE 1 USAID Sponsored Training (Number of Participants)

Project	Agency	Long Term	Short Term	User Group
RCUP	DOF	9	7	
	DSCWM	14	19	
	IOF	16	18	
FDP	MFSC	4	51	
	MFSC and others		85	
Rapti	DOF	3	13	540
	DSCWM	2	13	
IOFP	IOF	13	144	
	B.Sc.	40		

Source: CDIE Survey 1993

USAID supported the construction of facilities which have had a mixed impact in the ability of DOF and DSCWM staff to implement community forestry.

The extension of forestry services to remote areas of Nepal has been facilitated by infrastructure provided under USAID projects. Access roads to the district centers of Pyuthan and Salyan in the Rapti development zone were constructed by the Rapti project. RCUP and the Rapti project both helped in constructing district forest offices and associated housing for DOF and Department of Soil Conservation and Watershed Management (DSCWM) staff (see Table 2). The team found some facilities to be in good order and in use by GON and other donor projects. In some areas, however, RCUP constructed buildings were found vacant.

Earlier RCUP evaluations point to the inefficiency of the bidding and construction process and the lack of consultation with all concerned parties which resulted in many buildings remaining unoccupied from the time they were constructed. In the field investigation, the evaluation team found that most of these structures were occupied and that the offices were providing a center for DOF and DSCWM community forestry activities. The Jomsom area, however, illustrated the weaknesses of RCUP's overemphasis on infrastructure and facilities construction as an institution

building strategy. Of the Jomsom experience, Khatri-Chetri (1992:320-21) writes:

> The project was considered a failure because the environment was harmed more than it benefitted, as 12,000 cubic feet of timber from local forests was used to construct a few large offices.

Indeed, the evaluation team found the RCUP construction had simultaneously increased demand for large timber while weakening indigenous management of community forests. Moreover, the local DFO was in the process of shutting down operations to allow the Annapurna Conservation Area Project to take on forest management coordination in the district. The project had occupied another building as its headquarters. Urban expansion in Jomson continued to follow the patterns of commercial timber cutting that RCUP set into motion.

TABLE 2 Building Construction Under RCUP (Number of Buildings)

Agency	Gorkha	Myagdi	Mustang	Total
DOF	16	15	11	42
DSCWM	9	6	6	21
IOF	2			2

Source: USUSAID/Nepal Records of RCUP

The Institute of Forestry (IOF) has shown continuous attention to curriculum reform in order to better meet the needs of community forestry extension workers.

From its beginning in the early 1980s, the IOF has focussed on curriculum reform which included provision for social forestry. Almost as soon as RCUP implemented the first curriculum reform (B.Sc. program under RCUP) was in 1982, USAID and IOF staff undertook efforts to update it by introducing participatory development concepts and methods. The establishment of a Bachelor of Science forestry program to train forest officers was facilitated by the strengthening of faculty through the participant training documented above.

IOFP fostered the participation of women foresters. The institute opened its doors to women students who were helped by an affirmative action policy that reserved seats for women and minority groups. Women comprise more than 10 percent of the student body, yet

still seem to have more difficulty finding employment.

Reform efforts were slowed by the focus on maintaining order during the national political transition to democracy. IOF students lobbied for better conditions for students and more security for graduates. Curriculum reforms and their implementation are still retarded by cumbersome institutional arrangements between IOF branch administration and the central Tribhuvan University system administration. This is a larger educational policy issue that affects other sectors such as health, so while the project made headway from within, accomplishments were slower than they might have otherwise been.

While community forestry training capacity has clearly been increased at IOF, staff retention remains an issue. Participant training has led to upgrading of staff to the point where many have left for more prestigious or lucrative opportunities elsewhere. Nonetheless, there are about fifty permanent faculty with Masters or higher level training. The solution, increasingly recognized by committed staff, implies a yet stronger IOF wherein consulting services are provided for both institutional clients and resource users. There is some evidence that indicators such as the number of collaborative research arrangements and the degree of participation of IOF faculty on consultant teams is increasing, but some DOF staff remain frozen in their pre-reform vision of IOF as the "training school" for its foresters. This view does not help IOF to improve its institutional profile in the country and to influence policy decision-making.

Working with the District Forest Officer (DFO), NGOs or contract Technical Assistance has accelerated the rate of community forestry operational plan preparation and the success of operational plan implementation.

Nationally, approximately 2.6% of land in Nepal suitable for community forestry has been formally turned over to user group management. Yet in the Rapti zone where USAID assistance has been concentrated, 5.71% of the potential land has been handed over. Similar trends are apparent in other project areas. The 273 ha. handed over in the three Village Development Committees (VDCs) where UMN is active in Dhading District are important because of changes introduced by the NGO presence.

The successful UMN pilot sites, attracted broader local interest in participation in the community forest program. The forest ranger in the area stated that despite its small area 60 percent of the DOF forests turned over were on the periphery of the UMN/NRMP project zone where, "it was much easier to work." In fact, while the evaluation team was in the field farmers from the surrounding villages approached both the NGO forester and the local ranger to request appointments so that they could develop community forests. Of fifty villages with community forestry activities in the

NRMP project area around Dhang, only three were actually NRMP project forests.

The success in speeding up the formation of user groups, and preparation of the management plans is due to the close working relationship developed by the NGO with the DOF staff. In both instances, the work of the NGO was viewed by the DOF as helping them to meet their targeted number of management turn overs to user groups. The forest ranger in Naubise stated that because of the coordination with the UMN/NRMP, he was able to reduce the time spent on "policing and protection" from nearly 100 percent to only 20-30 percent thereby freeing him to spent 70-80 of his time on community development. As a result he had greatly benfitted from increased contact with villagers stating that he derived great satisfaction when upon arriving in a village market, the local population approached him rather than fled. Both foresters stated by working together each had an easier job. The project foresters great fear was that his colleague would be transferred and replaced by someone "of the old school."

USAID sponsored training to user group members is raising their capacity to manage community forests.

As shown in Table 1, the Rapti project has provided training for user groups. NGOs are also working with forest users to increase their capability to manage community forests. Through their use of village resident motivators, the evaluation team felt that the NGO approach was more effective in providing training to user groups.

In Dhading district UMN field staff of the NRMP project live in and work with villagers for one year to build their awareness and capabilities before moving into community forestry activities. They follow this up with another two years of technical support to the forest user groups. This includes assistance in the formulation of a forest management plan as well as training in sociocultural methods of management and harvesting. The project uses crass site visits, Rural Conservation Education programs, and short technical training sessions to impart capacity. A five-day technical training in Goganpani VDC resulted in the adoption of 110 improved stoves. Other training covered nursery management, community forestry management, and compost making. The evaluation team saw evidence of forest protection, and harvesting by user groups at the UMN/NRMP sites. The UMN approach is being further diffused through formal training sessions held in the Local Development Training Center (a facility transformed from former Nepal Coppice Reforestation headquarters).

Likewise, Care/Nepal has a village motivator live in a village for an extended period of time. The motivator works with the villagers building awareness and organizational capability. Technical assistance to the user groups (referred to as Community

Development Committees in Mustang) is provided over the three year project cycle. In the Mustang District, the evaluation team saw the evidence of village level involvement of plantation maintenance in an environment that required very intensive management activities. The extreme was at the Phallayak plantation where villagers voluntarily irrigated twice a day during the dry season. Rock walls and canls were well-maintained reflecting villagers willingness to make in-kind contributions.

USAID-sponsored activities have encouraged privatization of the seedling nursery system in Nepal.

Private and user group nurseries are better managed to meet local demands for fodder tree species thar are government nurseries. Because they are not bound by government production targets, private and user group nurseries are able to respond to free market demands for tree species production. This point was recognized by the Rapti project, which initiated a move toward privatization of nurseries. In 1993, 25% of all planting stock used in the Rapti project area will come from private and community managed nurseries. That figure is scheduled to rise to 70% of all planting stock over the next three years. This change is important to lowering program costs. DFO expenditures in the Rapti District came to over 30 percent of the budget in 1990 before the privatization program started. In Dhading where community and private plantations supply planting stock, costs were minimal. Even when an unexpected demand for *Dalbergia sissoo* meant that the DFO had to import seedlings from outside the region, villagers paid the seedling costs.

At the Nisikot - Dhading District community forest nursery, 14 species of trees and grass are grown for community and private use. All of these were multi-purpose fodder and fuelwood species preferred by farmers. Total production from 1991 to 1993 in this area alone was 226,600 seedlings. The sale of seedlings in the past year has brought in Rs. 125,000. A resource management training center is being funded by the proceeds from these sales.

Through the sale of forest products or the rights to them, user groups are learning how to manage funds for the financing of community development projects.

Most community forestry sites visited by the evaluation team were selling products from the community forestry site and banking the returns in a user group account. The sales varied from charging a fee to cut grass or extract dead wood to revenues generated from the harvest of thinnings or mature trees. In the Machindra Nath forest, the user group committee had taken the initiative to issue users identification cards and charge fees for cutting and for leaf fodder collection. In Nepal, where much of the economy was only recently monetized, this concept of community savings was revolutionary.

The funds raised by the sale of these products and permits was available for community development activities. In most instances, funds were applied to improving conditions at the village school. The Baghmare user group had donated 50,000 Rs. to support building a secondary school. The Pireni user group at Narayanpur rented land from the school for 3,000 Rs per year for their grass seed production operation. They also purchased furniture for the school. When visiting the Lali Guras women's user group, in Salyan District, the evaluation team learned that the group had recently provided wood from their community forest for construction of a new school.

Awareness, Education and Advocacy

Increased levels of awareness have fostered village user groups to organize and solicit DOF and NGO support to develop management plans and to formally hand over management authority.

The evaluation team feels that this represents one of the more important findings of this evaluation. There is a marked change over the last three years in the level of awareness that villagers have about community forestry, and a marked increase in the number of requests by village organized user groups for the turn over of management authority.

Although there is an inherent level of distrust by villagers in government officials, the perceived benefits of community forestry are outweighing their reticence, as they place an increasing level of demand on government forest offices and NGOs for technical assistance. Table 3 shows the number of forests handed over to date in the districts visited, and the number of applications pending during the present fiscal year. With the exception of Mustang, applications either match or far exceed the number of forests handed over to date.

TABLE 3 Forests Turned Over to User Groups and Actions Pending

DISTRICT	T.O. FORESTS	APPLICATIONS PENDING
MUSTANG	4	3
GORKHA	38	100+
DANG	32	30
PYUTHAN	29	105

The evaluation team witnessed a number of instances in which villagers were actively pressing their case. As soon as we stepped out of the Jeep to visit the Phara Sal/Salla Ban forest in the UMN Dhading District a delegation of villagers approached UMN forester

Shalik Ram Neupane to request his assistance in mapping their forest. The Baghmare forest user group, assisted by the Rapti project technical assistance team, was petitioning the Government of Nepal to allow them to set up and operate a saw mill to process their forest products. The group realized that they could benefit from the employment provided and product value added by milling the trees cut from their forest. This issue of community forests providing users with commercial, as opposed to merely subsistence, benefits is central to the policy debate over pending rules and regulations of the new Forest Act 2050 (1993). The team's extended discussions with the Secretary of the Ministry of Forests and Soil Conservation at the Baghmare site confirmed that the highest level of government recognizes the importance of a decision over the transfer of rights to commercial exploitation to the future of community forest programs.

Finally, to assess the spread of awareness beyond the project area, the evaluation team visited a forest located one day's walk from the Gorkha District center. The team found that villagers were aware of community forestry and discovered then held a focus group interview with members of an informally organized forest protection committee. These people had heard of community forestry through a letter written by the local forest office to their VDC chairman. They responded by organizing a user group, undertaking protection of the forest and writing back to the DFO requesting assistance to develop a formal management plan.

Technology Introduction

Exotic species trials have been conducted, and some, such as napier grass which was introduced by the RCUP project, are successful technological introductions.

To date, technology introduction has not been a major part of the community forestry program. The emphasis has been on establishing protection as a first practice. Donor funded projects have developed nursery and plantation techniques that are used in community forestry as well as private forestry activities. Efforts by the NCRP to discover productive and easily multiplied species led to the validation that local species frequently provide better results than exotics. This is one of the reasons that the project was cut short and transformed into the NRMP.

The community forestry program has been successful because it recognizes that protection and management of forests are as much social as technical issues. Once the surrounding communities recognize the need to protect the forest and agree upon an equitable distribution of forest resources, the management problem can be solved. The projects advocate private tree planting of fodder species to stabilize terrace risers as a complement to protection

and reforestation of communal (state) lands. A major discovery in Nepal's forestry development was that it was unnecessary to fence the animals out of a plantation once a community agreed to restrict entry and sanction violators.

As forests being protected under community forestry management grow, there will be an increasing need for technological introductions that increase productivity and add value to harvested products. Communities will need technical support in singling, thinning and pruning in order to derive benefits from their growing forest without adversely affecting that growth. Assisted natural regeneration, enrichment planting, and other techniques can enhance the economic returns from sustainably managed forests. The technical assistance team from the Rapti project has assisted the Baghmare community forestry user group by conducting a study on the feasibility of establishing a sawmill. The next phase in the development of the community forestry program must begin to address these issues of technological support. A corresponding technical manual by the Rapti technical assistance team treats agricultural operations in community forests and will be incorporated into forestry training program curricula.

In the Mustang District where rainfall is insufficient to support reforestation without irrigation, the CARE/NRMP has been experimenting with various methods of vegetative propogation of willows and poplar species. They have also introduced interplanting of forage herbs and grasses which show promise given the tourism driven increase in commercial demand for hay. In fact, the team calculated that the forage grown in irrigated woodlots was more valuable than the wood itself.

Policy Change

USAID has had a major influence in the evolution of the policy enabling community forestry management in Nepal.

With more than 60% of Nepal's development budget funded through foreign assistance activities, the donor community has an inordinate amount of influence over Nepal's development strategy. USAID, though assuming a relatively smaller slice of the total forestry sector funding, has played a disproportionately important role, due to the above mentioned reasons, in establishing enabling policies and legislation for forestry development.

The USAID mission in Kathmandu has been influential in effecting policy change through input to the development and implementation of the Master Plan Forestry Sector (MPFS). Figure 1 offers a schematic of USAID influence on community forestry development in Nepal. The Master Plan places community forestry within an overall strategy of forestry development and allocates a substantial portion of development funding for the community

forestry effort. The master plan development effort was spearheaded by a three year design project funded by the Finnish Development Agency, FINNIDA. Donors in the forestry sector provided input in the form of policy analysis, and reviewed documents that became part of the plan.

USAID provided input to the community forestry sections of the plan based on the lessons relevant to participatory management being learned in implementing the RCUP and Rapti projects. The "Village Voices" dialogue conducted by RCUP was in recognition of the need to involve sociological as well as technical inputs in response to forestry development problems.

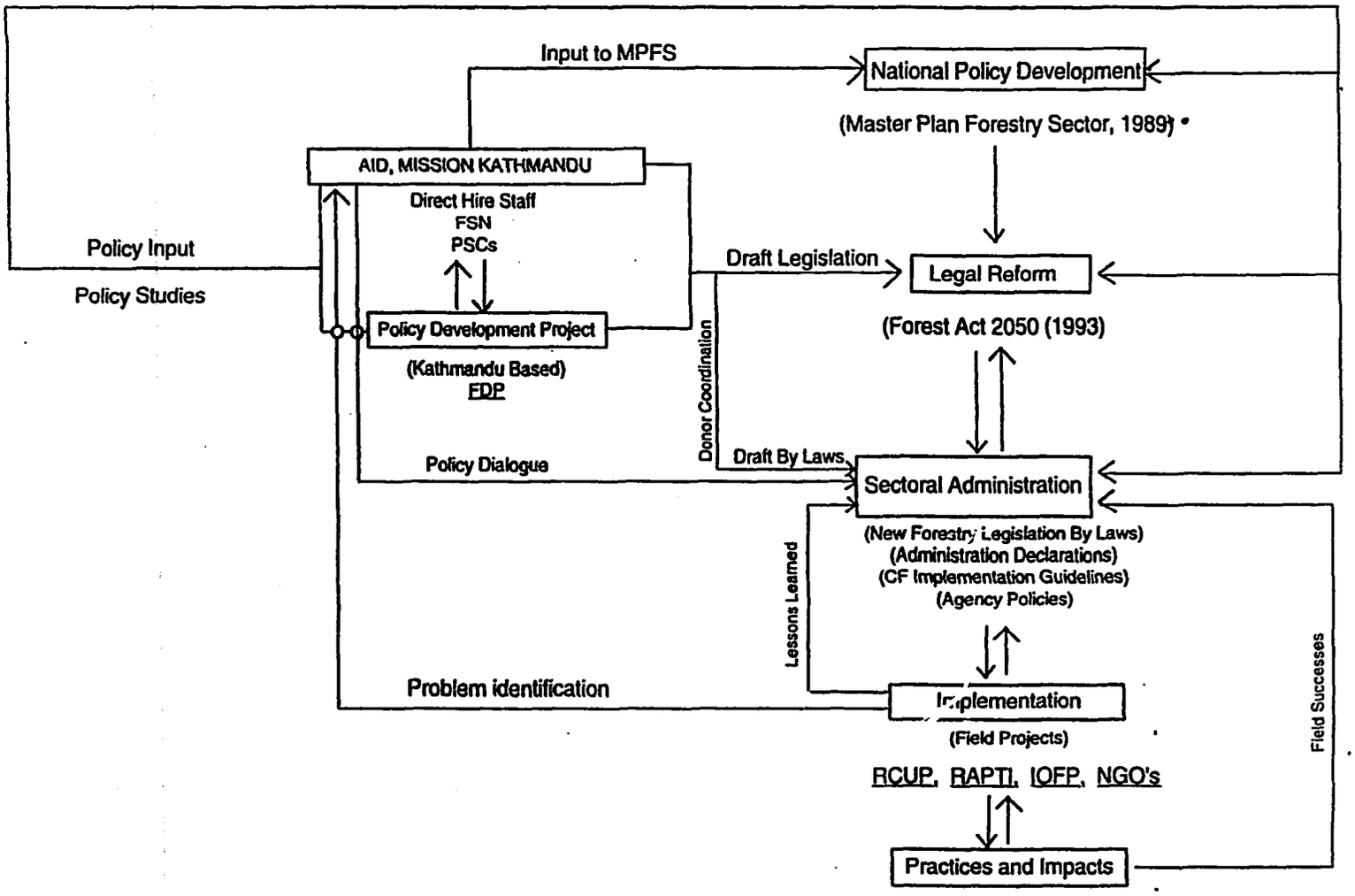
USAID also helped move the agenda forward on private forestry through a study on Private Forestry in Nepal (Kernan, Bender, and Bhatt 1986) and analysis of fuelwood marketing in Kathmandu. These policy studies influenced policy development in the private sector section of the MPFS and have remained influential in donor attempts to influence the privatization of the Timber Corporation of Nepal, a money losing government parastatal.

After GON adoption of the MPFS in 1989 and following the democratic revolution of 1990, it became apparent that the 1977 amendment of the Forest Act, 2018 (1961) needed to be changed to reflect the new priorities of the MPFS and the changed political conditions of the country. Section 25 of the newly formulated Forest Act 2050 (1993), states that:

> The District Forest Officer may hand over any part of a national forest to a user group in the form of a community forest in the prescribed manner entitling it to develop, conserve, use and manage such forest, and sell and distribute the forest products by independently fixing their prices according to an operational plan.

Figure 1

MODEL OF AID INFLUENCE ON COMMUNITY FORESTRY POLICY DEVELOPMENT



The Act further in sections 41 and 42, provides for the formation of user groups, and in section 43, states that, "a user group formed under Section 41 shall be an autonomous and corporate body with perpetual succession." The net result of the 1993 act is to give legal status to user groups, allow community forest user groups to sell and distribute forest products, and decentralize, from the regional to the district level, the process by which national forest land is handed over to user groups.

This act embodies lessons learned over the years by the Government of Nepal and the donor community in implementing community forestry. The Act gives legal sanction to the policy statements set fourth in the MPFS. USAID played an important role in drafting and encouraging the passage of the Forest Act 2050 (1993). The FDP supported a consultancy by Richard D. Pardo that produced two seminal documents to the development of the Act ("A Review of Forest Policy and Legislation in Nepal" and "Draft Guidelines for Bylaws Under the Forest Act, 1992). FDP also supported the English translation of the Act to give the donor community an opportunity to comment on its content.

A major constraint to greater positive socio-economic impact of community forestry is the lack of security established user groups have to move from protection to true utilization of forest resources under their management. To assure that provisions relating to private forestry, and those affecting the market sale of community forest products, were compatible with Nepal's emerging private enterprise sector of the economy, USAID sponsored a meeting with forest industry representatives to review the content of The Act.

US Direct Hires working with Foreign Service Nationals (FSNs) employed by the USAID mission, Kathmandu, played an important role in influencing the direction of this forest act by actively engaging in policy dialogue with the GON. They did this through building coalitions with the donors, lobbying members of Parliament, coordinating efforts with the USAID funded Democracy Project, SCOPE [1] legal consultants to the Parliament, and through personal contacts within the Drafting Committee of the Parliament. These efforts ensured that The Act provided the guarantees necessary for the future development of community and private forestry in Nepal.

Following passage of the Forest Act 2050, the Department of Forests drafted a set of Bylaws governing the implementation of The Act. These first draft Bylaws placed administrative restrictions by making permission from the DFO a necessity for user groups and private forest owners to sell or transport forest products.

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[1]An NGO associating lawyers, journalists, and political scientists to lobby the government for democratic reform.

Negative Donor reaction to the first draft of the Bylaws prompted a World Bank sponsored meeting for their review. The FDP again engaged SCOPE to provide a legal review of the first draft. The final form of the Bylaws is due to be released in the near future. Given the donor reaction to the original document, input from the SCOPE review and a continued lobbying effort by USAID FSN's, it is anticipated that many of the restrictions evident in the first draft Bylaws will be eliminated. This example provides an example of the continuing importance of USAID in helping to set critical forest policy in Nepal.

The USAID mission in Kathmandu has taken a key role in promoting donor coordination and policy dialogue within the forestry sector.

Due to interest by direct hire technical staff in the USAID mission, the Asian Development Bank placed a condition on the Forestry Program loan. It required that the Government of Nepal convene a Forestry Sector Coordinating Committee (FSCC). The FSCC now exists and provides a forum for coordination and cooperation between donors. As such, it provided USAID with a vehicle for contributing the lessons from its field experiences in community forestry to the GON and other donors, thereby effectively leveraging the sizable ADB loan. In a second instance, donor concerns, led by USAID, about the potential environmental impacts of the East Rapti Irrigation Project on the Chitwan National Park led to the re-design of that project. This was accomplished by catalyzing NGO forces to bring pressure on the ADB. Activities of the FSCC have been supported by the FDP. The FSCC meets every six months, and has sub-committees that are working on policy issues related to incentives, budget and implementation. At the time of the evaluation, FDP staff were using the FSCC forum to help the DOF to reason through decentralization policy and the implication for the forestry sector.

USAID funded field projects have also had an important role in shaping community forestry policy in Nepal. Policy problems identified in the field are often discussed with Project managers within the mission. This form of communication can lead to agenda items when Project Managers meet with GON officials or to more direct actions by the mission. Conditioned release of project funds made explicit in Project Implementation Letters and policy analysis papers produced by the IOFP helped move Tribhuvan University and the Institute of Forestry, toward more responsive programming and a more sustainable system of management.

In the Rapti project, members of the forestry Technical assistance team were active in a country wide effort to formulate guidelines for the implementation of community forestry. This led to a series of orientation meetings sponsored by the Community Forestry Development Project to train DOF staff in the steps taken to implement community forestry. The success of the Rapti zone,

Narayanpur, Pireni soil and water conservation area led to the recent (November 1993) administrative policy decree by Amrit Lal Joshi, Director General

of DSCWM, declaring the Pireni site as a national model for soil and water conservation and an educational and training center for the dissemination of the technologies developed.

4. EVALUATION FINDINGS: PROGRAM IMPACT

Impact on Practices

Villagers are now protecting forests in anticipation of eventual hand over of management authority.

The evaluation team saw evidence in many areas that villagers were forming forest protection committees in advance of the actual hand over of management authority. Most recently handed over forests had been protected for five or more years before the user group was formally constituted and granted management authority. At the UMN/NRMP site at Nisikot, Dhading District, members of the recently formed Phara Sal/Salla Ban forest user group had been informally protecting their forest for the last 3 to 4 years. Within the Rapti zone, Punya Ban in Pyuthan District had been protected for 7 years prior to turn over and Panda Beswor Ban, Dharna VDC, in Dang District had received 10 years of protection yet only recently been formally handed over to a user group.

In Gorkha, villagers outside of both the RCUP site and the Save the Children sites are aware of the community forestry activities associated with these projects and have begun to define and protect forest patches in proximity to their village. The fact that local groups are petitioning the DOF with little or no extension effort.

Planting of multi-purpose fodder trees has increased on private lands.

In addition to plantings on abandoned marginal lands, the evaluation team noted that farmers are planting trees on their terrace risers of their Bari land and are even accepting a lower crop yield to plant fodder species on their Bari land. This was especially evident in the Gorkha District, where Bari land, though still in agriculture production, is extensively planted with trees. More recent plantings were noted in Salyan District, where the Lali Guras women's forest user group were planting fodder trees on their terrace risers. Gilmour and Fisher (1991) noted a similar land use change in the Sindhu Palchok and Kibhre Districts of central Nepal. They equated the increase in private on farm plantings as a response to the increased scarcity of forest products available from public forest lands.

This rapid adoption of forest protection is due to the success of community forestry in project areas, an increased awareness and sense of resource scarcity.

Forest rangers have begun to change their practices from policing to user group organization. The services retain their command structure but the new targets are geared to number of user groups formed and forests turned over. Even where earlier projects had imposed top-down control, villagers were motivated to take on management responsibilities prior to receiving formal authority.

In Gorkha District the evaluation team found that Kamudanu Ban had previously been a Panchayat forest. After the fall of the Panchayat system, the forest had been open to exploitation. The surrounding community formed a user group, closed and protected the forest for one and a half years, and petitioned the DFO for technical support in drawing up their management plan.

In discussions with the DFO of Dang District, Mr. Harihar Sigdel, we learned that villagers form protection committees to advance their claim to be legitimate users of the forest. After providing protection for a few years they can state a better case for being the legitimate users of the forest. In all cases observed, official harvest of live trees occurred only after the forest was officially registered in the user groups name.

Biophysical Impact

Forests under community forestry management or under informal protection schemes, have a measurable increase in forest growth, and regeneration, improved ground cover, soil moisture retention, and a reduction in soil erosion.

Table 4 summarizes the condition of the forests at 12 sites visited by the evaluation team. This table illustrates the variety of site conditions under which community forestry is practiced. In the Rapti zone and at Gorkha, recovery of the forest is occurring fastest on areas that were highly degraded Sal forests. A study by Jeff Fox (1993) compares forest growth in the vicinity of Bhogtini, Gorkha District, in 1980 and 1990. The area considered included a patch of forest that was initially offered protection under the RCUP project. The site was a highly degraded hillside of Sal (*Shorea robusta*) that was being over harvested and over grazed. Fox found that in the ten year period that the density of the forest had increased from 746 trees/ha in 1980 to 3,345 trees/ha in 1990. Fox estimates that in 1980 the site contained 648 square meters of wood, and that by 1990 this figure had increased to 3,389 square meters. The evaluation team visited the Bhogtini site, now a handed over community forest, and found it to be a thriving stand of pole size Sal trees.

The Bhogtini community forest was characteristic of other forests in the Gorkha area, and it is the belief of the team that this success has led to further villager protected forests in the surrounding area. The DFO of Gorkha has over 100 applications on his desk this year from village groups soliciting his services in the preparation of operational plans. In discussions with the DFO (Shekhar Kumar Yadav) the team was told that the highest demand is for turn over of degraded Sal sites, with growth potentials similar to the Bhogtini forest.

Sites in the Rapti zone showed evidence of changes in hydraulic

conditions, and erosion stabilization. These forests had less tree cover, but were being protected from grazing to allow the regeneration of the forest. Members of the user group at the Takuri Ban community forest described torrents coming off the hillside 40 years ago, and how they first organized a protection committee to stabilize landslides and protect their valuable crop lands below. At Panda Beswor Ban the evaluation team saw newly constructed water taps, that were fed by springs originating in the forests that villagers claimed had previously stopped running in the winter dry season. Narayanpur, Pireni, was the classic success story, where bare eroded ground had been converted to productive grass lands (Napit and Yadav 1993).

Forest regeneration is occurring on abandoned upland agricultural lands as a result of development processes that include increased educational opportunities, urbanization and an overall intensification of cultivation on more productive private lands.

As described in greater detail in the sister report on sustainable agricultural practices, cropping patterns in the hills of Nepal are changing due to a variety of development related causes. The net result of those changes is a trend toward abandonment of marginal agricultural lands and a reduction in the usage of high country pastures. Upland terraces (Bari land) are either being planted with fodder trees or naturally regenerating into forests, and high country pastures with reduced usage are reverting back to forest and woodland cover. These trends, if continued, stand to have a significant impact on the overall natural forest environment of Nepal.

While traveling to the UMN/NRMP Nisikot site, the project forester, Shalik Ram Neupane, pointed out extensive areas of Bari land that had been used to grow sugar cane and were now abandoned. He explained that the NRMP nursery was supplying seedlings for the farmer to plant on those abandoned terraced slopes. The team also observed abandoned terraces being planted with fodder trees in the Daurali VDC at Gorkha. Y.B. Malla, in his PhD dissertation "The Changing Role of the Forest Resource in the Hills of Nepal" (1992) analyzes these observed trends of marginal land abandonment in the Kabhre Palanchok District of central Nepal. He estimates that in his study area 7.4% of the available agricultural land had been abandoned. Gilmour (1990) posits a three level typology resource scarcity wherein he argues that when the walk to areas of extensive firewood exceeds four hours, villagers are motivated to invest in forestry activity. This is seen in increased abandonment of bari terraces and their conversion to private forest supporting up to 1,000 stems hectare and in a willingness to participate in community forestry activities. Where wood is more available, attempts to increase forest cover are sometimes "met with apathy or even indignation."

Likewise, alternative economic and social opportunities are reducing the size of sheep and goat herds using highland pastures. The evaluation team was told that in Tini Gaun, Mustang District, that the size of the village herd had decreased from 800-900 animals down to 300-400 animals. Dan Miller, USAID/Kathmandu, substantiated this finding by commenting that herd sizes in Nepal are decreasing and that more sheep and goats are now being brought across the border from Tibet. The environmental impacts of this reduced herd size were noted in trekking reports of technical assistance teams working for the Nepal Australia Forestry Project. When interviewed, Don Gilmour, former project director, stated that forest regeneration of these highlands under reduced grazing pressure lowered the quality of the pastures but resulted in increased crown cover.

Habitat protection provided by community forest management appears to be favoring an increase in wildlife populations and the preservation of biodiversity.

Although definitive data on wildlife populations is hard to obtain, the general perception among villagers is that populations have increased with the protection and renewed growth of forests. When queried, the majority of villagers will tell you that a "Bagh" (tiger, or really leopard) lives in their forest. Fox (1993) states that the first harvesting in Bhogtini was prompted by the villagers belief that "...a small population of leopards had returned to the regenerated sal forest and were perceived as a threat to children walking to school." The evaluation team saw a dozen or more pheasants while walking through the Punya Ban in Pyutan. In the Mustang area the forest user group in Kalopani community forest included in their management plan a 500 rupee fine for anyone caught taking wildlife from their forest.

TABLE 4 Condition of Project and Planted Community Forests

Site	Yrs. Protected	Diameter	Crown Cover	Ground Cover
Rapti (Natural Forest)				
Baghmare	16	4-6"(15-30")	80%	Absent
Panda Beswor	10	2-4"	Sparse	Excellent
Tikuri Punya	8	2-10"	Variable	Excellent
Gorkha (Natural Forest)				
Kamudanu	1.5	1-2"(8-13")	100%	Excellent
Jalberi	5	15-16"	Sparse	Excellent
Khar Ko Pakha	5	3-5"	100%	Excellent
Bhogtini	14	2-5"	80%	Poor
Tutap Ban	2 to 6	1-4"		Poor
Jomsom (Plantation)				
Panda Khula	3	1-2"		Poor
Lupra	3	1-3"		Poor

Source: CDIE 1993
Diameter Measured at D.B.H.

Socio-economic Impact

In those project areas where forest protection has been well established and the authority to manage forests has been "handed over" to user groups. USAID funded community forest activities have played an important role in changing socio-economic conditions. However, the full economic impact of successful community forest management cannot yet be evaluated. Forest protection appears to be only one factor, albeit a significant one, in evolving rural production systems in Nepal's middle hills. Other factors include continuing monetization of the rural economy, rural labor shortages due to seasonal migration, and permanent rural-to-urban migration. The implementation findings discussed above indicated the need for follow-on technologies and management practices if benefits are to be maintained on a long term basis. Nevertheless, the assessment team was able to make the following observations with regard to the socio-economic impact at this stage of the community forestry program.

User group management of community forests has led to an increase in collective savings and investment in local development.

Well established forest user groups typically pool their

earnings from fees and fines levied on users into savings accounts that are used to support local community development projects. By and large these savings are modest, derived as they are from small fees levied on users for the regular harvesting of dead wood, leaf litter and grasses, and from fines levied on those who violate the conditions of the management plan (e.g., harvesting on days not authorized by the user group committee). Investments are often made to repair or construct public buildings. The Lali Guras women's forest committee in Salyan, for example, donated Rs 1000 for the repair of its local school and for the construction of school furniture. A number of groups, such as the Baghmare committee in Dang District, have invested in the construction and maintenance of forest nurseries, which themselves become income generating enterprises while providing the community with a ready supply of appropriate fuelwood, fodder and fruit crop species.

However modest user group savings may be, the investment of these funds represents an important development in collective decision making, cooperation and community "self-help". Donor and government support to these groups has provided important encouragement to participatory management of resources and to the familiarization of villagers with the principles of coordination and cooperation that are essential to building local democratic institutions.

More efficient management of community forest resources has important implications for the work of rural women in Nepal.

The net effect of trends is an economizing of women's labor. Women have the major responsibility for activities directly related to food processing and preparation, which includes the harvesting of fuelwood for cooking and fodder for feeding of livestock. Any impact on the availability of forest resources will thus be felt most significantly by women.

An International Food Policy Research Institute study on the consequences of deforestation for women's time allocation, agricultural production and nutrition in the hill areas of Nepal found that women's time spent collecting fuelwood, fodder and grass amounted to 2.5 hours per person per day averaged over the year (Kumar and Hotchkiss, 1988). Deforestation increases the time women must spend to collect fuelwood and fodder, decreases the amount of time they devote to agricultural production, food preparation and child care.

The assessment team found in those areas where effective community forest activities have been established, households are responding to grazing restrictions in protected forests by planting fodder grasses and trees on private farmland. Regulated harvesting is also reported to have caused a shift in the roles of men and women regarding fuelwood collection. User fees levied per load of fuelwood, regardless of weight, has encouraged more men to collect

fuelwood because they are able to carry a larger load than women for the same fee.

Controlled harvesting practices have led to a more equal distribution of common resources, reduced hoarding and increased their overall availability.

User groups, when properly constituted, should represent users of the protected forest. By adhering to rules for harvesting, such as set days to take defined products from the forest, or proportional distribution of the resources harvested, all users are assured of an equitable distribution of those products. This is especially true where USAID project sponsored activities (especially UMN/NRMP) have consciously worked to include lower caste groups as members of the user group. In addition, there appears to be an increased awareness among women for the need for planned and fair distribution of common resources. Community forest harvesting regulations reportedly deter women from hoarding fuelwood and fodder supplies. In Pyuthan, where the major product being harvested is grass, members of the Takuri Ban forest user group told members of the evaluation team that one of the best things about the community forest program was that products were distributed equitably between user group members.

5. EVALUATION FINDINGS: PROGRAM PERFORMANCE

Program Efficiency

The measureable benefits of Nepal's community forestry program and of the part attributable to the USAID input into that program will always be difficult to measure. The program has been developing over a 15 year period, and has included a tremendous amount of donor support in that development process. Viewed independently, any one input or support for any one component of that development process would almost certainly prove to be cost ineffective. However, as is often the case, an expensive "mistake" in one project, such as excessive plantation fencing in RCUP, can lead to a subsequent development activity being both efficient and effective, the discover that protected forests require no fencing. There have also been "sunk costs" in institutional development, manpower training and re-orientation, undertaken in projects that look inefficient and technically unsuccessful, but without which the underpinnings of later successful and apparently less costly activities could not have been accomplished. IOF's incorporation of social forestry as part of its core program appears permanent and could presumably be sustained at minimal cost and little or no sacrifice to the continuing stream of benefits that derive from the improved partnership between villagers, NGO (and perhaps eventually private) foresters, and DOF staff. Although impossible to quantify these benefits, just as it is not yet clear what value can ascribed to the program benefits deriving from increased protection. Furthermore, until the positive returns from improved community organization and forest regeneration can be proven sustainable, the positive benefits streams already reflected in collective savings accounts of user groups can be viewed optimistically but with a modicum of caution.

Program Effectiveness

As a result of donor support, there has been a modest increase in the participation of women and disadvantaged groups in the development of community forestry in Nepal.

There is a wide disparity in the equitable distribution of community forestry program inputs from region to region in Nepal. The Hindu caste structure, the disadvantaged position of ethnic minorities and occupational castes, and of women in general, within that structure, remains resistant to change in the rural areas, particularly of Far Western Nepal. Nevertheless, it is clear from the team's findings that USAID support to the community forest program, particularly through NGO project implementation, has influenced the greater participation of these groups in community decision making - about natural resource management.

The USAID/Nepal-sponsored study "the Status of Women in Nepal" (1979) was the first donor effort to recognize the central role of

women in farm and non-farm activities. Since that time, USAID has provided important support to ensuring that the requirements of women are met in project design and implementation. These efforts appear to be having an impact. The assessment team found that there is increased recognition among line agency personnel of the relationship between women's roles and project success, and an increased awareness among the user group membership itself of the need to include women in management committees. This was demonstrated by the inclusion of at least two women members in more recently formed committees. The general picture was better in SCF project sites in Gorkha where women's organizations provided the entry point for subsequent intervention.

The team found that participation in government and donor-funded Non Formal Education classes has improved women's willingness to participate in forest user groups. In addition, women who have received some community forestry training and made cross visits to other communities are more confident and eager to participate and discuss issues with men. The chairperson of the Lali Guras committee is one such example. It is important to note that these women are supported and motivated by committed Women Development Officers and local DOF personnel. The level of participation of women is higher (Lali Guras, Salyan) where it is evidenced by their eagerness to attend committee meetings, and interest in programs that educate them on the qualities of different species of trees, planting techniques and soil conservation methods.

However, women's participation frequently appears limited to the inclusion of women in management committees. Women do not yet appear to be fully involved in the community decision-making process regarding forest resources. Enhancing women's involvement requires first building women's confidence. This is better achieved in small women-only groups, which then can be expanded to include men. Such committees show more promise of effective management as evidenced by the Lali Guras forest user group in Salyan.

Similarly, USAID, in its program activities, has supported the inclusion of ethnic minorities and occupational groups in forest management training and community forest management. These efforts have been more successful in villages where the population is not dominated by a single caste, where the forest user group is more socially heterogeneous. The team found evidence of multi-caste or multi-ethnic representation in the majority of the USAID-supported forest user groups, including the Shiva Shakti group in Satbaria and the Takuri Ban group in Pyuthan.

In the Terai communities, for example, the forest management committees are dominated by its more influential, higher caste members. The chairmen of the management committees (Baghmare and Dhana, Dang) are also chairmen of their respective VDCs. These men with strong ties to local power structures have perhaps contributed to the politicizing of forest user group committees. In Baghmare,

the service caste exhibited a tendency to shy away from participating. Baghmare forest users committee, which recently completed its first 5-year management plan, has no female members. No concerted effort seems to have been made to involve service caste and women in the management committee. This questions the ability of the management committee to represent the interest of all users, particularly the poorer service caste households and women headed households. UMN/NRMP's NFE training for women appeared to offer a promising model. Women had increased management presence and taken over much of the enforcement responisibilities in at least one forest where it was recognized by the higher caste men that women were the primary forest users.

In the Garapani women's forestry user group supported by Save the Children Federation (SCF) in Gorkha, service caste women are dominated by local elite women. The result is that the service caste women often do not voice an opinion, or even if they do their comments are disregarded by the high caste women. The women's group is not representative of the beneficiary group. The capacity of this group to manage its community forestry will depend on the attitude and willingness of the high caste users to foster unity in the group. Early indications are that this is unlikely to happen in the foreseeable future.

These examples underscore the difficulty of ensuring equity in support to community forestry. They underscore some of the weaknesses in the community management model, particularly in the recognition by village elites of the rights that all forest users have in the management of their forest.

The formation of forest user groups is serving to strengthen democracy in Nepal through the empowerment of the rural population including women and lower castes.

A democratic society is based not on elections to parliament, but on strong local level institutions that embody the concepts of equality and fairness. Village level Nepal, burdened with an exclusionary system of caste, inequity toward women and a history of a privileged elites, is a weak base for equality in democratic development.

Forest user groups are based on an entirely different standard. By including women and lower caste members in user groups those disenfranchised members of society are beginning to be heard. More importantly, user group members are learning valuable lessons about working together to achieve a community benefit. As such, the user groups and user group committees appear to be important building blocks to a more representative democracy in the country.

User group empowerment will help to keep the system of government in Nepal responsive to the needs of the local people.

User groups are also demonstrating their political power. The evaluation team was told of user groups, such as those in Dhankuta, banding together to form user group associations to lobby at the district level. At Baghmare, in the Rapti Zone, the forest users group with support from the Rapti project, has petitioned the government to its highest levels for a policy change that will allow them to operate a saw mill. In Jomsom, local leaders have agreed to limit exploitation to one of several alpine forests while awaiting resolution of competing claims for use in the area.The DFO has closed the area to use and stopped hand over of natural forests. All sides in the dispute are petitioning the local political leader who is now operating in an uncharacteristically transparent juridical forum. The area has just been incorporated into the Annapurna Conservation Area and will thus benefit from mediation assistance of the King Mahendra Trust for Nature Conservation. These forms of local empowerment and adjudication were unheard of in Nepali history.

Program Sustainability

The empowering of user groups with the authority to manage their own forests has proven to be an effective strategy for sustainable conservation and utilization of natural resources in Nepal.

Nepal's community forestry program has evolved from control management of forests by political organization, to management by forest uses' groups. In 1977 the Forest Act, 2018 (1961) was amended to make provision for community forestry through Panchayat forests and Panchayat Protected Forests. Although community forestry was theoretically provided for at this time, the actual acreage of forests turned over to the Panchayats (local political units) remained very small.

The advent of user group forestry has been the factor which is most responsible for the increase in villager willingness to embrace the community forestry concept. Table 5 illustrates the increase in community forestry handed over in the last three years. The team saw impressive expansion outward from initial or pilot sites with the older core areas taking over increasingly the control and management of ongoing community forestry activities. In Dhading (UMN/NRMP) for example, the number of forest user groups expanded from an initial two to eighteen at the time of the evaluation. Most importantly, three groups had already taken over full responsibility for their forest from the government.

The resultant bio-physical impacts on the forest land have been documented in the above findings. There is no doubt that the system works. The sustainability of those bio-physical impacts and the effectiveness of the community forestry program will depend on the

ability of the DOF to build trust with the local population and to make available the services necessary for the further development of the program as the benefits of forest protection begin to pay off in harvestable material. Forest Act 2050 establishes the legal framework that represents a major step forward in promoting the sustainability of the community forestry program.

The economic returns to improved community forestry management have begun to drive local development.

User groups are earning money from their community forests. They have bank accounts and (as shown above) are beginning to use their earnings for community welfare development projects. Their rights to harvest and sell products from the forest have been strengthened in the new forestry legislation of 1993.

It is the feeling of the evaluation team that the dramatic rise in interest by villagers in community forestry is fueled by the perceived benefits from harvesting forest products. As the forests regenerate under protection the opportunities for community forests to fund local development needs will increase.

The Baghmare Forest User Group in Dang and the Jalbire in Gorkha District are case studies of the economic power that community forestry can develop. The Baghmare forest user group manages a 306 hectare mature Sal forest. They have been protecting the forest for the past 14 years. The results of this protection are evident in the advanced regeneration of Sal on formally degraded areas. This has been under community forestry management since 1989. To date the user group has harvested and sold logs and made investments in the local school with some of the proceeds from that sale. They are in the last year of management under their first operational plan, and with the assistance of the Devres/New ERA technical assistance team from the Rapti project have updated their operational plan and proposed establishing a community owned saw mill to increase the profitability of their forest enterprise and to increase local employment opportunities. Under this new plan they would harvest 25,000 cft/yr of Sal on a 50 year sustainable rotation. In a Rapti project supported feasibility study (1993) for the proposed mill they anticipate net revenues of 6,000,000 Rs/year ($120,000/year).

The Jalbire women's user group harvested 850 cubic feet of mature Sal logs from their forest. Although the harvest resulted in the profuse re-growth of Sal coppice reproduction, the group was reprimanded because the harvest exceeded the prescription in their management plan by 4 trees. The harvested materials were impounded by the DFO, and the logs and fuelwood have, for more than a year, been left to rot on the site. This situation is the result of administrative indecision due to the lack of clarity regarding harvest and sale of products in the existing forest legislation.

The evaluation team sees this transformation from protection to utilization as the coming challenge for the community forestry program in Nepal. If villagers can not only begin harvesting, but can also combine harvesting with secondary processing to capture the value added and create local employment opportunities, community forests can act as the mechanism by which local communities fuel their own development efforts.

Development organizations can also expect to recoup some costs. The UMN/NRMP established its own nursery and training center. Both generate enough revenue to meet their annual operating expenses. The revenue totalling Rs 350,000 in fiscal 1993 comes from two sources: training fees and plant sales (sissoo saplings and napier grass slips).

Despite the apparent take-off of the community forestry model in Nepal, its sustainability is subject to continued progress in the evolution of policy and institutions.

This evaluation has argued that the Nepal program has made tremendous progress in establishing a successful community forestry program and that USAID assistance has been central to this progress. It is too early to say that the program is fully sustainable without continued outside support. Despite a six fold increase in the number of user groups registered in the past three years the total coverage is estimated at less than 3 percent of the forest slated for turn over. Government reticence was cited as the main reason for this limited progress. DOF staff worried that the villagers were not capable of sustainable management without their technical guidance which was limited by budgetary and logistical factors. In fact, it appeared to the team that where DOF staff had not undermined traditional management that local capacity for user based governance was adequate for most rural situations.

Government reticence to turn over management authority is more likely related to the fact that turn over implies no direct gain to the forest service and its employees. At the same time it introduces a formal loss of control, despite the provision that management authority can be rescinded if a group is found to in violation of the provisions of its management plan (opening the door for arbitrary adjudication). That conflicts concerning adherence to the management plan are appealed only within the forest service (up to the level of the Regional Forest Officer) and that user groups have no recourse to civil appeal also introduces uncertainty. The uncertainty is especially pronounced in cases where the forest resource represents significant commercial possibilities. Although the legislation is enabling, most forest service managers and staff felt that the intent of the community forestry program was to meet the subsistence and not the commercial aims of local villagers.

Another area of concern for the program's sustainability stemmed from the difficulty in providing follow-on supervision and

technical advice to user groups once the forests had been formally handed over. Government foresters are still concerned with nursery management, reforestation and policing activities. Time, the rigors of foot travel, and budgetary limitations for technical advice prevent DOF staff from visiting remote forest user groups. In Rapti, for example, only 0.13 percent of the DOF budget was devoted to forest management which included plan preparation in addition to subsequent monitoring and advice.

NGO foresters are not constrained from intense direct involvement at the village level, but they can only reach a limited number of remote communities. Despite efforts to reduce costs such programs are still too expensive for NGOs (especially international NGOs) to operate in much of the country. Local NGO capacity if increased could further reduce costs, but the environmental NGO movement is in its nascent phase. Furthermore, the team observed a tendency for NGOs to move on once they had successfully moved through the initial steps (up to formal turn over) of the community forestry model. Both Care and UMN tried to limit the period of direct involvement to only a few years.

Despite the need for technical follow-on advice, many foresters were unemployed. This was especially the case for recent certificate level graduates from the IOF program. A formula to link this group with the local users was lacking. When it becomes clear that groups can sell their products at a commercial level, new possibilities for private sector foresters may open up, but this has not happened yet. There may be a role for private outreach from the IOF itself.

Program Replicability

The community forestry model is rapidly being replicated throughout project areas.

The evaluation team saw numerous examples of formal and informal replication of the community forestry model. In the area near the Bhogtini forest in Gorkha District, patches of Sal forests are being protected and allowed to regenerate. In many areas, the demand for the turn over of forest lands to user groups is out stripping the ability of the DOF to respond (Table 3).

Table 5 shows, over the last three years, the growth nation wide in the formation of user group managed community forests. The increased awareness of community forestry, combined with the new emphasis on a democratic system of government and the benefits from community forests managed by user groups is overriding an inherent skepticism of government and pushing the community forestry program forward. In-service training provided by the Rapti project has had an impact extending beyond the project area. USAID lists number of user groups registered for the same period as increasing from 360 in 1990 to 1,933 in 1992.

TABLE 5 Rate of User Group Formation

1990-1991	1991-1992	1992-1993
535	905	1172

Over 188 rangers have been given Forestry and Communications Training (FACT) and 40 rangers have been trained in the use of a village consensus building workshop kit. Due to the frequent transfer of forestry personnel, on the average three years, those trained by the project have spread the benefits of their training throughout Nepal. This is evidenced by the fact that workshop kits have been requested by 3 districts outside Rapti and that 31 kits were provided by the project for use by the Department of Soil Conservation and watershed management.

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6. LESSONS LEARNED

USAID should avoid funding large multi-sectoral projects that have a heavy infrastructural development component.

The experience in RCUP and the early period of the Rapti project shows that large multi-sectoral projects are difficult to implement. By assuming that weak, usually government, institutions are the fundamental problem, their scale becomes a barrier to increased awareness and local participation. Those projects that include contract work for major infrastructural development can easily distort the local economy. As was discovered in the Mustang district, this distortion creates difficulties for subsequent development efforts and can create a negative local attitude toward USAID funded development efforts.

Integrating rural development is most successful at the grass roots level.

When an appropriate scale is achieved, integration of multi-sectoral efforts for rural development service delivery appear possible. At a local level, scale is determined by geography, i.e. the size of a watershed or subwatershed, and by the socio-political unity that is still reflective of the rural household's pursuits and interests. While the RCUP and early Rapti projects proved inefficient, ineffective, and poorly scaled, NGOs showed more promise in working across sectors to meet villager needs. .

Once the policy stage has been set, the most efficient method of extending community forestry practices has been through the use of NGOs.

NGO approaches recognize the integrated nature of subsistence agriculture and targeted manageable geographic units. Success is based on villager self help projects as opposed to coordinated service inputs from line agencies. Where NGO's were able to forge a strong partnership with a responsive DOF, community forestry extension was particularly efficient. The work of UMN, Care and SCF/USA is both of an appropriate size and conducted in an appropriate manner to effectively further the development of the community forestry program. The key seems to be that these NGOs can provide the continuous support necessary to get the community forestry model firmly rooted in a community's pattern of resource utilization.

Project activities in the forestry sector can provide a vehicle for the Agency to influence policy development in ways that are both effective and cost efficient.

The presence of forestry and natural resource expertise in the USAID mission increases the opportunity to influence policy reform through: policy dialogue and negotiation (Forestry Master Plan, ADB Forestry Program Loan, Forestry Act 1993), the leveraging of other donor resources, and the transforming of lessons learned by NGOs

into national practices. Catalyzing a policy shift from local experience in a manner that removes barriers to tree planting at a national level is an efficient and effective means of improving environmental conditions.

Donor commitment to long-term project implementation with a flexible project design improves project effectiveness and efficiency.

The long term commitment of USAID to the Rapti project resulted in the project being able to incorporate lessons learned in implementation into the project re-design. Without this learning ability and time to grow, projects can end before the long term benefits begin to accrue. Flexible design appears to be especially important in natural resource management projects where a lag of several years between project start-up and biophysical changes in the environment requires time for feedback to be incorporated. The impact of community forestry and other natural resource management projects increase with a long term commitment to funding.

Donor coordination improves effectiveness in implementing community forestry programs and increases the influence that USAID can have on natural resource policy.

Through the donor coordination efforts of USAID, the community forestry program has benefitted by increasing the country-wide awareness of field successes and failures. This coordination has also increased the ability of the donor community to influence forest policy development and has leveraged other donor resources to complement USAID's relatively small portfolio.

Targeting women in training and extension efforts can improve effectiveness and sustainability of community based resource management.

In almost all areas visited, there was a significant seasonal out-migration of men from their hill villages. Women are not only major users of the forest resources but also are more often at home in the village. Targeting women, as a stable population, for training and extension activities improves the effectiveness of those training activities and helps to assure the sustainability of the development effort.

Independence from local political institutions provides a critical enabling condition for community forestry to flourish.

The shift to formal user groups and user group committees, as distinct from panchayats and panchayat or VDC leaders, resulted in the establishment of functional user based governance as opposed to a political institutions for forest management. This development, combined with the local empowerment that followed Nepal's change in

government has had a dramatic effect on the interest that villagers are expressing in the community forestry program.

7. OUTSTANDING ISSUES

As community forestry takes off it is uncertain as to who will meet villager needs for technical and managerial services.

The growth in villager demand for management rights to forest lands is out-stripping the ability of the GON to provide forestry services. The increase in demand for forest turn-over is a recent phenomenon. In certain areas, this demand has already exceeded the ability of the DFO to assist in the writing of management plans and administer the turn-over process. With an increasing amount of forest land under community protection, the need for forest management services will only increase. The structure by which these services will be provided is an important issue to address both for the continued growth of the community forestry program and in order to maximize the benefits that a community can derive from the management of community forests. NGOs are an incomplete answer because they can only be present in a limited number of sites. GON personnel are stretched even further. Interestingly, many IOF trained foresters, particularly those with two-year certificates, are unable to secure employment. Increased community revenues from forest management and greater ease with calling on the outside world indicates the potential for the private sector to provide forest consulting services to users which, if it happened, could quickly absorb excess technical capacity and speed the turn-over process.

It is unclear who will resolve conflicts among users and between users and the larger society.

The absence of effective methods of conflict resolution threatens the sustainability of the community forestry effort. The institutional structures supporting community forestry have a very short track record within the social and administrative framework of Nepal. A need exists for proven methods of conflict resolution within user groups, and between users and non-users in order for the protection and management of the forest to evolve satisfactorily. New channels will also need to be established to resolve conflict between user groups and the state (DOF) over the implementation of approved management plans. Without these latter channels, inaction on issues of conflict can, by undermining the sense of security of access to a given resource, stifle progress and thwart the stated objectives of the community forestry program.

Within the GON, debate rages over whether community forests are to supply only subsistence or also commercial needs of the villagers. Conservative forces within the Department of Forests remain skeptical of the unrestricted trade in forest products, and favor a more controlled environment. Two issues may slow the program's development. The government is reluctant to allow villagers the latitude to make mistakes and tenure is not transferred in the turn-over process.

APPENDIX A

EVALUATION PROCEDURES

CDIE assessments of environmental programs are aimed at answering two central questions: "Has USAID made a difference?" and, if so "How well did it do it?" The central hypothesis of the assessments is that USAID, through the right mix of program strategies, can impact on local conditions and practices to produce favorable long-lasting changes in the bio-physical environment and on the socio-economic welfare of cooperating countries. This Appendix describes the process used to test this hypothesis in USAID social forestry programs.

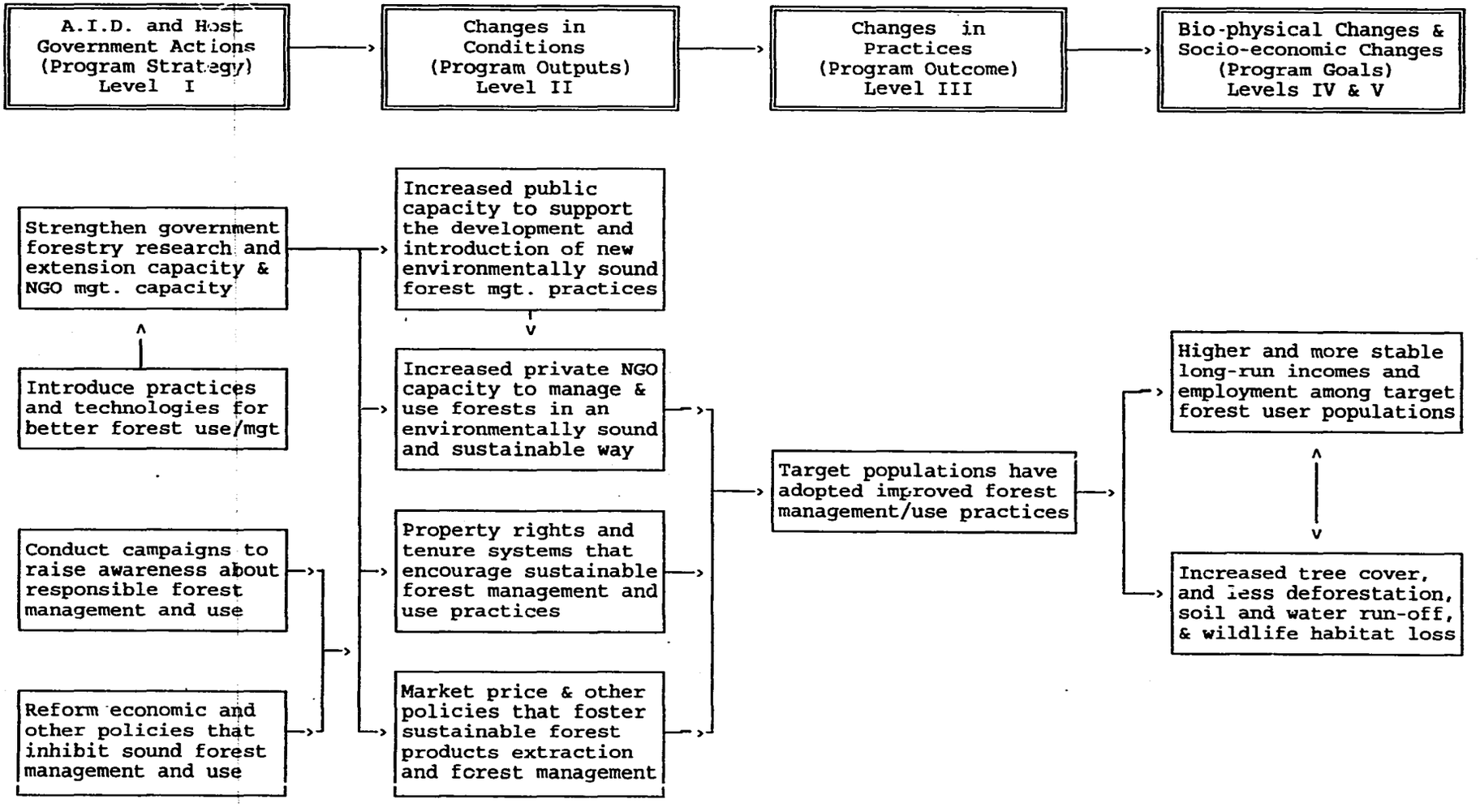
Impact - How much?

The assessment seeks to establish plausible association between USAID. program strategies or activities and changes in environmental quality, natural resource management and socio-economic well-being. In answering the first question, "Did USAID make a difference?", the assessment has attempted to document what happened or can be expected to happen. In Nepal the evaluation has gathered and examined "impact" information to determine whether the USAID projects accomplished their goals of increasing sustainable local forest management. The evaluation examines the relationships between environmental impact and community forestry program strategies using a five-level analytical framework. (Figure A-1.)

In the analytical framework, Level I lists the "**program strategies**" that USAID and Nepal government employed in implementing social forestry programs receiving USAID support. In the case of the RRDP these strategies include: building community level research, training and extension institutions, introducing new sloping agriculture lands, fostering awareness and formulating public policies that support local forest management.

At Level II, "**program outputs**" are the conditions that have resulted from implementing these strategies. They could include: the staffed, equipped and functioning regional forestry officers, new training curricula designed and implemented, newly formed local NGOs, new tree species being used, and management practices identified as sustainable, and changed policies and/or regulations affecting locally managed forests.

Figure A-1: Framework for Assessing the Impact of USAID Forestry Programs



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The Level III "**program outcomes**" resulting from changes in Level II conditions are the adoption of forest management practices by target populations.

Level IV and V "**program goals**" constitute the biophysical and socio-economic changes resulting from the adoption of Level III program outcomes or practices. Level IV and Level V goals can be viewed and mutually supportive.

For the purposes of the evaluation, Level IV "**bio-physical goals**" are the specific environmental objectives of the program being assessed, e.g., increased tree cover, and less deforestation, soil and water run-off, and wildlife habitat loss.

Level V "**socio-economic goals**" include sustainable increases in income, employment, and overall well-being of program participants. While access to income data is difficult, the continued involvement of beneficiaries in the program can be used as a "vote with their feet" proxy indicator of positive socio-economic impact.

Performance: How well?

In answering the second question, "How?", CDIE's primary concern is the **efficiency, effectiveness, sustainability** and **replicability** of the program.

Where data exist, the evaluation measures program **efficiency** by using monetary estimates of the flow of benefits to calculate an economic rate of return for those USAID and host government program investments to which benefits can reasonably be attributed. Because benefits occur into the future, their anticipated value must be annualized, adjusted to net out all costs incurred, and expressed as a discounted present value to compare to project investments.

To assess program **effectiveness**, the evaluation examines how well project sponsored technologies and services (e.g., training) are reaching intended target groups and whether there is equity or bias in access by participating target groups. Effectiveness indicators include trends in the patterns in delivery of services according to the make-up of target groups (e.g., gender or socio-political status).

The examination of **sustainability** is important at all program levels (Figure A-1). For example, will new (Level II) conditions created with USAID assistance continue or will they be reversed? Will target participants continue to employ newly introduced (Level III) practices? Will new (Level IV) forest management systems thrive over the long-run? Will increased (Level V) incomes, profits and jobs continue after USAID and host government support is withdrawn? Evidence of sustainability includes the continuation of activities, regulations, price structures and institutions

beyond the termination of USAID technical and financial assistance either on their own "internal" momentum or with host government or with other donor assistance. The principle measure of sustainability is the number of beneficiaries continuing to employ project promoted practices after USAID support had ended and the nature of added government and donor support provided USAID initiated activities. Indicators of bio-physical sustainability include trends an inventory of tree species and soil quality in target areas including evidence of any pest damage or effects of soil or water deficiency.

To determine the **replicability** the evaluation examines whether conditions and practices, promoted by the program, have spread beyond the target areas and whether such spread is "spontaneous", occurring among participants by "word of mouth" or other means without further outside support, or "induced" by public, private or donor agencies which have picked up on an USAID supported concepts and introducing them elsewhere. Replicability indicators include number of similar activities supported by local or international agencies outside the program target area and population; number of participants outside the target area that have adopted in sum or in part USAID sponsored practices.

Data collection procedures

CDIE employs a variety and primary and secondary sources of data and information to construct the chain of events linking program activities and resulting observed effects and impacts, to examine major evaluation issues, and to identify lessons learned.

In preparation for the field work CDIE collected and analyzed relevant secondary data and information that are available in Washington or in host countries from a range of sources including project documents, technical reports, and special studies that are available with the Agency's Development Information System.

In Nepal the evaluation team reviewed studies and reports conducted by host government agencies, private voluntary organizations, and international institutions. Because acquisition of primary data was also called for, the assessment team also visited a number field sites to make visual confirmation of changes that have occurred since USAID support began and to conduct key informant interviews as part of its primary data collection.

The team based its findings on a careful review of USAID project documents, interviews with individuals knowledgeable about USAID-supported community forestry activities in Nepal, and field visits to 16 sites in eight districts. This permitted an assessment of impact from the perspectives of both project implementors' and intended beneficiaries. The data collection sought information on key technical, institutional, economic and social indicators of Nepal's community forestry program impact and

performance. For each field site the team followed a common pattern of data collection and synthesis.

The team divided into sub-groups and focussed on separate aspects of the program. Site assessment forms were designed to carry out rapid appraisal of the biophysical characteristics of the forest in question. This enabled a better interpretation of responses garnered in a series of structured but informal interviews with project implementors and beneficiaries. Simple interview summary forms were adopted to facilitate data sharing among team members following the site visit and for subsequent reference. From these multiple sources of information, a site composite was assembled.

The team then went through a consensus building exercise to evaluate the significance of the site in terms of the overall evaluation questions and performance criteria. Rank order forms were developed calibrate the team's cumulative observations and to permit cross-site comparisons. An illustrative sample record from one site at Dharna in the Rapti Zone is included in Appendix B.

Following each field site visit, participating team members gathered to discuss their findings. A structured format was applied to these discussions to ensure team consensus on key points related to the performance of programs supported by A.I.D. In addition, the team developed a roster of key technical, institutional, social and economic indicators for evaluating program impact at each site. The team members used this roster to strengthen their consensus on the assessment of field site. The consensus building format and the key indicators ranking format are attached in the following pages.

NEPAL FIELD STUDY TEAM CONSENSUS FORM

COMMUNITY FORESTRY ASSESSMENT FINDINGS

A. Institution building

1. DOF - Evidence of an increased ability by DOF personnel to implement community forestry.
2. User Groups - Evidence of an ability by user groups to implement community forestry.
3. NGO's - Evidence of an increased ability by NGO's to assist in the implementation of community forestry.

B. Awareness, Education and Advocacy

1. Evidence of educational/awareness programs being carried out in the project areas.
2. Evidence of an increased level of awareness of community forestry by villagers.
3. Evidence of villager advocacy for extension of community forestry.

C. Impact on Practices - A description of community forestry practices.

1. User group organization.
2. Methods of protection.
3. Methods of harvest and product distribution.
4. Description of sanctions.

D. Socio-economic impacts

1. Evidence of increased benefits to the community.
2. Evidence of increased benefits to individual user group members.
3. Evidence of development activity funded through the sale of community forest products.

E. Program effectiveness

1. Evidence of equitability (cast, tribal, proximity) in the management of the forest.

2. Evidence of the addressing of WID concerns in the management of the forest.

E. Program Sustainability

1. Description of the external inputs provided in establishing and managing the community forest.

2. Description of the external inputs that are perceived to be necessary to future community forestry management.

3. Team's assessment of the sustainability of the community forestry efforts.

4. Continuation of DOF inputs.

5. Continuation of NGO inputs.

6. Sustainability of the Users group (economic and institutional).

7. Sustainability of the resource under management.

G. Replicability

1. Evidence of program replication beyond project input sponsored areas.

2. Evidence of increased participation of villages within project sponsored areas.

H. Lessons learned/Outstanding Issues

CDIE NEPAL FIELD STUDY

KEY INDICATORS TO ASSESS COMMUNITY FORESTRY PROGRAM IMPACT

Field Visit Site: _____ Date: _____

Technical Indicators[1]

__ Years forest has been protected.

__ Diameter at breast height (DBH)

__ Crown closure.

__ Ground cover.

Social Indicators

__ Representative membership of all stakeholders.

How participatory has the process of Forest User Group (FUG) formation and function been?

__ Local leadership.

How representative of the community is FUG leadership?

__ Quality of FUG Leadership.

How involved and committed to the success of the FUG is the leadership?

__ Extent of women's involvement.

How extensive has been women's involvement in the function of the FUG?

__ Sense of stewardship/responsibility for resource.

How developed is the sense of "ownership" among stakeholders for the resource?

__ Incentives for participation.

How extensive and enduring are the incentives for

[1] Ranking: 3=High; 2=Moderate; 1=Low

stakeholders to participate in FUG?

Institutional Indicators

__ FUG origins.

To what extent was the FUG formed from the "bottom up"?

__ Security of rights.

How secure are the rights of stakeholders to their resources? To what extent to the stakeholders understand their rights?

__ Planning.

If the FUG has an operational plan, to what extent is the operational plan collectively derived and understandable to all stakeholders?

__ Training.

To what extent did/does project staff/government staff provide training to FUG members in development of operational plan and FUG management?

__ Technical Support.

What is the level of technical support available to the FUG (e.g., from Line Departments, form project)?

Economic Indicators

__ Changes in land use/resource use patterns.

Extent to which project inputs have affected existing land use/resource use patterns.

__ Benefits/Costs.

How do the benefits of project/HMG inputs compare to the cost of the project inputs?

__ Cost effectiveness.

Extent to which project/HMG inputs incorporated low cost local resources.

___ Changing employment patterns.

Extent to which local employment opportunities have improved as a result to project/HMG inputs.

___ Improved markets.

Extent to which project/HMG inputs have improved marketing opportunities for beneficiaries.

___ Sustainability.

Extent to which project/HMG benefits are likely to continue when project inputs are completed.

APPENDIX B

DHARNA FOREST, RAPTI
(example of a site level consensus building form)

A. Institution building

1. DOF - Evidence of an increased ability by DOF personnel to implement community forestry.

   - Use of workshop model for developing FMP
   - New form developed only in Dang. 6 yr DFO to determine forest Needs, social profile, private trees -> forest allotment for a community
   - Study undertaken using scientific determination of user needs 6 cu.ft/yr/household are given. This

2. User Groups - Evidence of an ability by user groups to implement community forestry.

   - 10 years of protection of forest -- spontaneous
   - Buffalo sub-user group -- (technology: new fodder grasses being experimented with)
   - New multi-species plantation
   - They were entering protection = regulation on HMG lands.

3. NGO's - Evidence of an increased ability by NGO's to assist in the implementation of community forestry.

   - None. NGOs were not active in site

B. Awareness, Education and Advocacy

1. Evidence of educational/awareness programs being carried out in the project areas.

   - Rapti project extension program active in area.

2. Evidence of an increased level of awareness of community forestry by villagers.

   - Increased number of applications for assistance in forming user group and in writing Forest Management Plans
   - For past 3 years rangersno longer need to initiate user group formation process. New user groups are demanding turn over themselves. Awareness of turn over process has diffused.

3. Evidence of villager advocacy for extension of community forestry.

   - Strong evidence - Reported spread of interest, application at DFO's office

C. Impact on Practices - A description of community forestry practices.

1. User group organization

- 2 VDC's - Dharna VDC, ward #1 - 4 members
  - Saudiyar VDC, 4 wards - 13 members
  (2 women, 14 Brahmins and Chetris)
- Chairperson elected by entire group in general asembly for 2 yr term.

2. Methods of Protection

- 3 - hire watcher - payment 18 muri---- /watcher
- 20 month/yr/household or 15 Rs/pati 37.5 Rs/household
- Fire control - making fire line around forest by all community members

3. Methods of harvest and product distribution

- 1 day/yr - 1 Rs/Bari
- HMG forest open every study 1 Rs/Bari
- In C.F. no fee, as many loads as possible, 1 person/household

4. Description of sanctions

- 100 Rs for cutting Sal, Khair, Sissoo + Pine - for users
- No outside cutting yet encountered, no theft.

D. Socio-economic impacts

1. Evidence of increased benefits to the community.

- Increased water supply T. community - 3 To active + irrigation and spring used T. dry up in winter
- Community ownership of a nursery selling seedlings.

2. Evidence of increased benefits to individual user group members.

- No longer have to remunerate guard with grain payments indicating benefits are substantial and control efforts have paid off

3. Evidence of development activity funded through the sale of community forest products.

- None.

E. Program effectiveness

1. Evidence of equitability (cast, tribal, proximity) in the management of the forest.

   - Some caste representation on user group, all group member are literate. Some attempt at equitability. FUG brought members from 2 VDC's together -- not one case of theft.

2. Evidence of the addressing of WID concerns in the management of the forest.

   - 2 women on first user committee
   - Shifting of gender rules due to FM structure. Men and women pay same amount; men can carry more so they gather firewood. (shift in traditional roles) Women not included in decision making process.

F. Program Sustainability

1. Description of the external inputs provided in establishing and managing the community forest.

   - FMP preparation DFO's offices
   - Seeds for plantation - nursery to grow, tree and grass.

2. Description of the external inputs that are perceived to be necessary to future community forestry management.

   - None at first: only protection for 1st 5 years.

3. Team's assessment of the sustainability of the community forestry efforts.

   - Continuation of DOF inputs and basic services are all that appear to be required, i.e. recurrent costs.
   - Sustainable, little if any needed.

Continuation of NGO inputs

   - None.

Sustainability of the Users group (economic and institutional)

   - Very sustainable, well organized, good leadership, everyone buys in with the plan.

Sustainability of the resource under management.

   - Very sustainable - see forest inventory form.

G. Replicability

1. Evidence of program replication beyond project input sponsored areas.

   - Laxmipur used same model. Three years prior rangers had to solicit for new group formation; now groups come to them and demand DOF intervention.

2. Evidence of increased participation of villages within project sponsored areas.

   - 600 households
   - 5 wards
   - 4,000 and user group members

H. Lessons learned/Outstanding Issues

Strong leadership needed for effective FUG function. Why would people protect forest 15 yrs ago without any guarantees

APPENDIX C
PERSONS CONTACTED

Government of Nepal

Ministry of Forests and Soil Conservation

Dipenda Purush Dhakal, Secretary, Ministry of Forests and Soil Conservation, Babar Mahal
Amrit Joshi, Dir. General Department of Soil and Water Conservation
Mohn Wagley, Chief Planning Div, Department of Soil and Water Conservation
Damodar P. Parajuli, Director General, Department of Forests
Tirtha Maskey, Director General, Department of National Parks/Wildlife
James Schweithelm, Chief of Party, Forestry Development Project

Ministry of Agriculture

Bindeshwori P. Sinha, Secretary
Jagadish P. Gautam, Director General, Department of Agriculture

National Planning Commission

Ram Yadav, Forestry and Agriculture Coordinator

Nepal Agricultural Research Council (NARC)

Bishnu Gyawali, Rice-Wheat Project

Institute of Forestry

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Mike Calavan, CDIE USAID/Washington
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Sher Plunkett, USAID/Washington
George Taylor, USAID/Washington
Rob Thurston, USAID/Washington
Chuck Strickland, USAID/Washington
Tracey Parker, former biodiversity advisor, USAID/Nepal
Kay Calavan, Independent consultant

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Theodora Wood-Stirvenou, Acting Director
Jim Gingerich, Agriculture and Rural Development Officer
Roger Bloom, ARD
Batuk Upadhya, ARD Forester
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Dan Miller, ARD
Richard Byess, PPD
Anjali Pradhan, PPD

Project Sites/Outside Kathmandu

Rapti Zone:

Rapti Project Staff:
Ram Dayal Prasad Yadav, District Soil Conservation Officer, Dang (GON)
Mahup Dungana, Chief Devres/New Era
Hari P. Bashyal, Community Forestry Advisor
Khrishna Bahadur, Planning Economist, New Era
Somnath Acharjya, District Soil Conservation Officer, Dang (GON)
Harihar Sigdel, District Forest Officer, Dang District
Kurt Mcloud, Peace Corps Volunteer, Rucum District
Keshwor Ghutam, District Forest Officer, Pyuthan District
Ambica Regmi, District Forest Officer, Salyan District
Mrs. Bharah Shali, Womens Development Officer, Salyan District
Salik Ram Chaudhary, District Forest Officer, Dang (GON)
Dr. Chaudhary, Senior Adviser for Agriculture, Dang (GON)
Sharad Pageni, Ranger, Dang District
Genesh Karki, Assistant Forest Officer, Dang District
Mohamad Naseer Ansari, Ranger, Dang
Ashok Kumar Poudyal, Monitoring Advisor
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Rapti Project Beneficiaries:
Lum Bahadur B.C., Chairman, Panda Beswar Forest Users' Group
Bodhi Lal Sharma, Secretary, Panda Beswar Forst Users' Group
Dharna Kumar, Chairman, Phara Sal/Salla Forest Users' Group
Narayan Upadhaya, Treasurer, Phara Sal/Salla Forest Users' Group
Num Kant Dahal, Chairman, Water Users Group, Narayanpur
Harsaram Rant, Assistant Chairman, Water Users Group, Narayanpur
Meth Lal Ghimeri, Treasurer, Water Users Group, Narayanpur
Mrs. Bakuli Kumar, Chairperson, Lali Guras Forest Users' Group
Dumbar Sharma, Adviser Water Users Group, Narayanpur
Birbahado Basnet, Member Water Users Group, Narayanpur
Mekhlal, Previous Vice Chairman, Water Users Group, Narayanpur
B. Sharma, Chairman, Youth Group, Narayanpur
Lum Bdr. B.C., Users Group Chairman, Panda Beswor Community

Forest
Bodhi Lal Sharma, Users Group Secretary, Panda Beswor Community Forest
Bal Kumari Thapa Mugar, Chairperson, Jalbire Womens Forest Users Group

Gorkha District:
Shekhar Kumar Yadav, District Forest Officer, Gorkha District
Krishna Prasad Ghimire (IOF graduate), Attached Forest Officer, Gorkha District
Bhagwat Manandhar, Soil and Water Conservation Officer, Gorkha District

RCUP/Save the Children Federation (SCF), Gorkha

Project Staff:
Project Manager
Agriculturalist
Program Officer

Project Beneficiaries:
Mrs. Chini Maya, Chairperson, Women's Group
Mrs. Kanilu, Community Nursery Caretaker,
Mrs. Ram Naye, Member Women's Group
Mrs. Suntali, Member Women's Group
Mrs. San, Member Women's Group

Dhading District:

UMN/NRMP Project Staff:
Duman S. Thapa, Project Manager, Kathmandu
Maaike Wigboldus, Team Facilitator, Naubise
Shalik Ram Neupane, Forestry Officer, Naubise
Bishnu Tripathi, Agriculturalist, Naubise

UMN/NRMP Project Beneficiaries:
Ganesh Prasad Upadhaya, Chairman, Machhendra Nath Forest Users',Group
Dharma Kunwar Luintel, Chairman, Forest User Group,
Narayan Rupakheti, Treasurer, Forest User Group
Mrs. Kuma Rupakheti, Womens Committee

Mustang District:

Kedar Nath Bhatta, Project Manager, NRMP/CARE-Nepal
B.K. Shrestha, Agroforester, NRMP/CARE-Nepal
S. Adhikari, Development Assistant, NRMP/CARE-Nepal
Kulu B. Thakali, Owner, Sweet Home Lodge, Jomsom
Mina Pun, Village Motivator, Kagbeni, CARE/NRMP
Gaya Prasad Barai, District Forest Officer, Mustang District
Tank Narayan Shrestha, Soil and Water Conservation Officer, Mustang

District

Others:

Don Gilmour, Forestry Coordinator, IUCN Past Team Leader Nepal Australia Forestry Project
Bill Jackson, Team Leader, Nepal Australia Forestry Project
Andrew Ingles, Forestry Advisor and Deputy Team Leader, Nepal Australia Forestry Project

Ram B. Chhetri, Social Scientist, Nepal Australia Forestry Project
Bishnu Subedi, Institute of Forestry Faculty, Consultant to the Nepal Australia Forestry Project
Patrick Robinson, Swiss Development Corporation
Gerad Gill, Winrock International
Lex Kassenberg, Program Coordinator, CARE International in Nepal
Noel A. Corkery, Principal Landscape Architect, EDAW, Australia
Stuart S. Demanski, Programme Coordinator, HMG/DANIDA Tree Improvement Programme

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