Community Based forest Enterprises in Nepal: Case Studies, Lessons and Implications

Bhishma P. Subedi
Hemant R. Ojha
Ken Nicholson and
Surya B. Binayee

Asia Network for Sustainable Agriculture and Bioresources (ANSAB) and The Netherlands Development Organization (SNV/Nepal)
Community Based Forest Enterprises in Nepal: Case Studies, Lessons and Implications

Bhishma P. Subedi
Hemant R. Ojha
Ken Nicholson
Surya B. Binayee

Asia Network for Sustainable Agriculture and Bioresources (ANSAB)
& The Netherlands Development Organization (SNV/Nepal)
# TABLE OF CONTENTS

| LIST OF TABLES | V  |
| LIST OF NEPALI WORDS USED IN THE REPORT | VI |
| ACRONYMS AND ABBREVIATIONS | VII |
| ACKNOWLEDGMENT | VIII |
| EXECUTIVE SUMMARY | IX |

## CHAPTER 1

1. **INTRODUCTION** 1
   1.1 Background 1
   1.2 Objectives of the Study 2
   1.3 Methodology 2

## CHAPTER 2

2. **ENTERPRISE MODALITIES AND CASE STUDIES** 7
   2.1 Overview of Community-Based Forest Enterprises 7
   2.2 Sole Enterprises 10
   2.2.1 Lokta Hand made Paper Producers, Naglibang, Parbat 10
   2.2.2 Cash Crop Producer and Trader, Kolbung, Ilam 14
   2.2.3 Large-cardamom Producer, Dhanmane, Ilam 17
   2.3 FUG Enterprises 19
   2.3.1 Shankamagar FUG, Rupandehi 19
   2.3.2 Kankai FUG, Jhapa 25
   2.3.3 Janaki FUG, Dadeldhura 28
   2.4 FUG Consortium Enterprises 30
   2.4.1 Chaubas Wood Processing Enterprise, Kavre 30
   2.5 Co-operative Enterprises 37
   2.5.1 Allo Cloth Production Club, Shankhuwasabha 37
   2.5.2 Praja ntfp Co-operative, Chitwan 41
   2.6 Private Limited Companies 45
   2.6.1 Humla Oil Private Limited, Humla 45
   2.6.2 Malika Handmade Paper Private Limited, Bajhang 56

## CHAPTER 3

3. **ANALYSIS AND DISCUSSIONS** 61
   3.1 Overview of CBFE Modalities 61
   3.1.1 Sole ownership 62
   3.1.2 FUG enterprises 62
   3.1.3 FUG consortium enterprises 63
   3.1.4 Co-operative enterprises 64
   3.1.5 Community based companies 65
   3.2 Factors Related to CBFE Genesis, Operation and Growth 66
3.2.1. External Inputs 66
3.2.2. Marketing Outlets 69
3.2.3. Community Characteristics 73
3.2.4. Natural resource base 76
3.2.5. Technology 77
3.2.6. Policy Factors 78
3.3. Enterprise Consequences 79
3.3.1. Economic Efficiency 80
3.3.2. Social Equity 84
3.3.3. Natural Resource Conservation 88
3.3.4. Comparative Analysis of Enterprise Modalities 91

CHAPTER 4

4. CONCLUSIONS AND RECOMMENDATION 95

4.1 Conclusion: Forest Enterprises as Vehicles of Sustainable Development 95
4.1.1 CBFE Modalities 95
4.1.2 Factors Leading to Enterprise Success 96
4.1.3 Enterprise Consequences 96

4.2 Recommendations 97

REFERENCES

ANNEXES

Annex 2. List of Plants with Their Common Name and Scientific Names
Annex 3. Check List of Information to Gather on Each Enterprise for a Foundation Case Study
LIST OF TABLE

Table 1. Conceptual framework of the study 3
Table 2. Commonly found forest product lines and types by enterprise modalities 8
Table 3. Selected CBFE cases by ownership modalities 9
Table 4. Land use allocation of cash crop producer 14
Table 5. Source of income for the last three years in Shankamagar FUG, Rupandehi 1998 22
Table 6. Baseline features of the four FUG associated with the sawmill 32
Table 7. Approximate income and expenditure of the sawmill, 1998/99 33
Table 8. Fixed assets of HOPL (as of July 1998) 49
Table 9. Income statement of HOPL 49
Table 10. Comparative analysis of enterprise modalities on market, social, technology and conservation criteria 92
ACKNOWLEDGEMENTS

The authors of this study are grateful for all the support that has ensured a good quality publication. Several organizations generously contributed case studies and reviewed the draft including Steve Hunt (The Nepal Australia Community Resource Management Project) and Brian Peniston and Sailendra Thakali from The Mountain Institute. MFSC Officials also provided valuable comments during various phases of the study from design to writing. Ram Prasad Acharya, Sushil Gyawali, Saroj Shrestha, Ashok Baniya and Shambhu P. Dangoal all supported in the collection of data. Michael Victor in partnership with RECOFTC, Bangkok as well as Susan Sellars undertook editing while Sangita Amatya did the type setting. Francisco Tolentino (SNV) looked after the budgeting and publication of the final document.
## ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACPC</td>
<td>Allo Cloth Production Club</td>
</tr>
<tr>
<td>ANSAB</td>
<td>Asia Network for Sustainable Agriculture and Bioresources</td>
</tr>
<tr>
<td>ATI</td>
<td>Appropriate Technology International</td>
</tr>
<tr>
<td>BCN</td>
<td>Biodiversity Conservation Network</td>
</tr>
<tr>
<td>BCP</td>
<td>Bhaktapur Craft Printers</td>
</tr>
<tr>
<td>CBED</td>
<td>Community Based Economic Development Project of CECI</td>
</tr>
<tr>
<td>CBFE</td>
<td>Community Based Forest Enterprise</td>
</tr>
<tr>
<td>CDO</td>
<td>Chief District Officer</td>
</tr>
<tr>
<td>CF</td>
<td>Community Forestry</td>
</tr>
<tr>
<td>Cf</td>
<td>Cubic Feet</td>
</tr>
<tr>
<td>Co ops</td>
<td>Cooperative</td>
</tr>
<tr>
<td>DDC</td>
<td>District Development Committee</td>
</tr>
<tr>
<td>DFO</td>
<td>District Forest Office/Officer</td>
</tr>
<tr>
<td>DOF</td>
<td>Department of Forests</td>
</tr>
<tr>
<td>DPR</td>
<td>Department of Plant Resources</td>
</tr>
<tr>
<td>EC</td>
<td>Executive Committee</td>
</tr>
<tr>
<td>FECOFUN</td>
<td>Federation of Community Forestry Users, Nepal</td>
</tr>
<tr>
<td>FUG</td>
<td>Forest User Group</td>
</tr>
<tr>
<td>FUGC</td>
<td>Forest User Group Committee</td>
</tr>
<tr>
<td>Ha</td>
<td>Hectare</td>
</tr>
<tr>
<td>HCDA</td>
<td>Humla Conservation and Development Associations</td>
</tr>
<tr>
<td>HOPPL</td>
<td>Humla Oil Private Limited</td>
</tr>
<tr>
<td>HPPCL</td>
<td>Herbs Production and Processing Company Limited</td>
</tr>
<tr>
<td>I/NGO (s)</td>
<td>International/Non Governmental Organization (s)</td>
</tr>
<tr>
<td>IEDI</td>
<td>Industrial Enterprise Development Institute</td>
</tr>
<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
</tr>
<tr>
<td>Km</td>
<td>Kilometer</td>
</tr>
<tr>
<td>MAP</td>
<td>Medicinal and Aromatic Plants</td>
</tr>
<tr>
<td>MFSC</td>
<td>Ministry of Forests and Soil Conservation</td>
</tr>
<tr>
<td>MHPL</td>
<td>Malika Hand Made Paper Pvt. Ltd.</td>
</tr>
<tr>
<td>MIS</td>
<td>Market Information System</td>
</tr>
<tr>
<td>NACFP</td>
<td>Nepal-Australia Community Forestry Project</td>
</tr>
<tr>
<td>NACRMP</td>
<td>Nepal-Australia Community Resource Management Project</td>
</tr>
<tr>
<td>NTFP</td>
<td>Non-Timber Forest Product</td>
</tr>
<tr>
<td>NUKCFP</td>
<td>Nepal-UK Community Forestry Project</td>
</tr>
<tr>
<td>OP</td>
<td>Operational Plan of FUG</td>
</tr>
<tr>
<td>PCDP</td>
<td>Praja Community Development Project</td>
</tr>
<tr>
<td>PF</td>
<td>Panchayat Forest</td>
</tr>
<tr>
<td>PPF</td>
<td>Panchayat Protected Forest</td>
</tr>
<tr>
<td>Qtl</td>
<td>Quintal</td>
</tr>
<tr>
<td>SFDP</td>
<td>Small Farmers Development Projects</td>
</tr>
<tr>
<td>SNV</td>
<td>The Netherlands Development Organization</td>
</tr>
<tr>
<td>TADA</td>
<td>Traveling Allowance and Daily Allowance</td>
</tr>
<tr>
<td>VDC</td>
<td>Village Development Committee</td>
</tr>
</tbody>
</table>
### LIST OF NEPALI WORDS USED IN THE REPORT

<table>
<thead>
<tr>
<th>Nepali Words</th>
<th>Meaning in English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ropani</td>
<td>Unit for Land measurement (20 Ropani =1 ha)</td>
</tr>
<tr>
<td>Bhari</td>
<td>A head load of forest products (generally 40 kg in the case of wood products such as fuelwood and 20 Kg in the case of foliage such as fodder).</td>
</tr>
<tr>
<td>Rupees (NRs.)</td>
<td>Name of Nepali Currency 1 US$ = 74 (2000)</td>
</tr>
<tr>
<td>Namlo</td>
<td>A band of rope used to carry head loads</td>
</tr>
<tr>
<td>Cheena</td>
<td>Horoscope</td>
</tr>
<tr>
<td>Phenga</td>
<td>Traditional waistcoats of Rai</td>
</tr>
<tr>
<td>Jilima</td>
<td>Mat</td>
</tr>
<tr>
<td>Tamasuk</td>
<td>Contract paper</td>
</tr>
<tr>
<td>Tippani</td>
<td>A document used in the process of formal decision making in the government organisation</td>
</tr>
<tr>
<td>Koris</td>
<td>Traditional unit of Nepali hand made paper (1 Koris= two hundred sheets of paper)</td>
</tr>
<tr>
<td>Purji</td>
<td>Licence or permits for forest product collection</td>
</tr>
<tr>
<td>Bhangra</td>
<td>Traditional sacks</td>
</tr>
<tr>
<td>Pakha</td>
<td>Sloppy land</td>
</tr>
</tbody>
</table>

### Conversion Rates

Nepali units of measure are used in the text. The conversion rates are the following:

- 1 US$ = 73 NRs (as of Dec. 12, 2000)
- 1 Ha = 20 Ropani
- 1 Quintal = 100 kg
- 1 Bhari = 40 kg
EXECUTIVE SUMMARY

This publication is the result of a study conducted in December 1999 by Asia Network for Sustainable Agriculture and Bioresources (ANSAB) and the Netherlands Development Organization (SNV) Nepal to assess present and past initiatives in small-scale community-based forest enterprises (CBFE). In particular, the study reviewed community-based enterprise initiatives for generating economic opportunities and conservation of forestry resources at local level. It covers enterprises that which are concerned with the promotion of timber and related wood products, fuelwood, fodder, and a variety of Non-Timber Forest Products (NTFP). The study assesses factors and dynamics that lead to the development of such enterprises as well as relative efficiency of existing enterprise modalities in realizing developmental goals of sustainable and equitable economic development.

The main outcomes of the study include the systematic analysis of a sample of existing community-based forestry enterprises and documentation of lessons learned from such enterprises in Nepal. The outcomes would be useful for any new programs in the promotion of forest resources with a focus on enterprise development and poverty reduction.

A total of 11 enterprise cases were studied, which represent several ownership options (sole, group, cooperative, private limited company), locations in the east-west axis (Jhapa and Ilam in the East, well up to the district of Baitadi in the West), elevations (Terai, Middle Hills, High Mountains), product lines (timber, fuelwood, fodder, and other paper, essential oils, broom-grass, and fibers) and property rights regimes of raw materials (private, common, national). While five enterprises have been studied at greater details for in-depth analysis, the other six cases are taken as short examples illustrating specific aspects. This is followed by cross-case analysis of issues and observations. Comparative strengths, and weaknesses of each enterprise modality are also presented. These findings form the basis of conclusion and recommendations.

The study team focused on community-based enterprises and eliminated the branches of large companies established at the rural/community level from the scope of the study. For the purpose of the study, community-based enterprises are defined as those being operated at rural areas, usually near a resource base that supplies raw materials, and that are planned and operated by local communities or individuals who are also the main beneficiaries of the enterprise. As far as possible, older cases were selected as they can offer greater opportunities to reflect a wide spectrum of issues and perspectives. All these 11 cases fairly represent the scenario of CBFE in Nepal and cover a wide range of forest product lines.

The findings of the study are presented according to enterprise modalities, factors leading to enterprises and the consequences of such enterprises.
Community based forestry enterprises exist in various modalities that can be considered in several aspects. Ownership structure and the nature of linkage to natural resources are the two principle dimensions of CBFE modalities. There are five ownership types that include sole, FUG, consortium of FUG, coop, and private limited. Consortium of FUGs is somewhat different from FUG alone and coop. In terms of linkages to natural resource for raw materials, most of the economic and enterprise activities depend on community forests. The sole enterprises are dependent on raw materials from private sources. These enterprises have specific strengths and weaknesses in generating profits, benefiting poor and conserving natural resources. While companies and sole enterprises are efficient in creating profits, FUG and their consortium and co-operatives have a scope for creating more favorable equity impact. All have contributed to the conservation of natural resources though in varying degrees.

The 11 CBFE cases suggest that there are certain factors that contribute or hinder the genesis, operation and growth of enterprises. These include external inputs, marketing outlets, community characteristics, natural resource base, technology, and policy factors. External inputs in terms of awareness raising, technical assistance in resource management and enterprise development and operation, financial support has determined the fate of enterprises. Market demand, marketing information, channels and marketing infrastructure together constitute marketing outlets that determine the successful operation of a CBFE. Community characteristics that influence the genesis, operation and growth of a CBFE include leadership, local institutions, entrepreneurship culture, economic objectives of the entrepreneurs, and others.

Natural resource base is the starting point of forestry enterprise. The type, condition and abundance of the resource also dictate the selection of CBFE and its success. Use of suitable technology adds value to products and helps to make management more efficient. The case studies suggest that if a technology is built on traditional knowledge or expertise and is less sophisticated, the enterprises have better chances of success. Likewise, policy factors have crucial effects on CBFE success. Implementation distortion and rapid changes in policy environment has created further risks to enterprises, and in many cases severely hurts the managerial, financial, economic, and ecological aspects of the enterprise operation.

Consequences of CBFE have been explored in three main aspects: economic efficiency, social equity, and natural resource conservation. Economic efficiency is measured in terms of financial viability, income and employment opportunities, and subsidies and provisions of social goods. Social equity has been measured in terms of gender impact, benefits distribution among wealthy classes, differential access impacts, and inter-community equity. Consequences in terms of natural resource conservation are assessed in terms of conservation awareness and sense of ownership, changes or revisions in operational plans, and resource management practices.
The enterprises studied in this study clearly indicated significant levels of income for entrepreneurs, not only as individual income but also in the form of savings in community funds of FUG. Men and women in the community have got employment opportunities as part time or full time in enterprise management, raw material collection, processing, and marketing. Creation of such opportunities at the local level has indicated a potential to reduce regional imbalances.

Community based forest enterprises have primarily benefited collectors and FUG members, who include poor, disadvantaged and women. Depending on the institutional context that the enterprise is bestowed with, poor and women have been involved and have benefited from the enterprise significantly. Emergence and growth of CBFE sometime bypasses local traders, who are affected adversely but still have an opportunity to be part of the enterprise itself to safeguard their interests.

The study indicates that with the activities of such enterprises natural resource conservation can be enhanced in various ways. As entrepreneurs became more aware of the scope of natural resources in their livelihoods and developed deeper sense of the ownership, they have improved resource management plans, institutionalized more sustainable harvesting practices and paid for the resource conservation activities, initiated measures to mitigate threats to natural resources, assisted natural regeneration and conducted artificial regeneration of the plant resources. This concludes that if proper institutional mechanisms exist, increased commercial use of forest and pasture resources will contribute to conservation rather than depletion of natural resources.

The overall conclusion of the study findings is that community based forestry enterprises have a scope for local economic development, harnessing social equity and conserving natural resources. But this involves tremendous active efforts on the part of government, supporting agencies, entrepreneur communities, which actually determine the genesis of the enterprises and the impact they have. Facilitating service delivery in some crucial aspects such as marketing, resource management and technology development can trigger CBFE and local groups or individuals that have the capacity to learn to manage the various dimensions of enterprise activities. Several modality options allow for emergence in different contexts and for different goals to be focused.
Community Based Forest Enterprises in Nepal: Case Studies, Lessons and Implications


Published by: ANSAB and SNV/Nepal

First Edition: December, 2002
Reprint: December, 2004

ISBN No.: 99933-53-38-8

Photographs: All by ANSAB unless specified

Established in 1992, ANSAB is an independent, not for profit, non-governmental organization working in South Asia region with its headquarters in Kathmandu, Nepal. ANSAB is governed by a board of international experts, and has a dedicated team of members and staff, with specializations in varied areas relating to resource management and livelihood generation. ANSAB is committed to enterprise oriented solutions to biodiversity conservation and sustainable community development. The main program activities of ANSAB include community forestry/natural resource management, natural product based enterprise development, policy, research and networking.

(ANSAB) Asia Network for Sustainable Agriculture & Bioresources
P.O. Box: 11035, Kathmandu, NEPAL
Tel.: (977-1) 4497547, Fax: (977-1) 4476586
E-mail: ansab@ansab.org
Website: www.ansab.org

The Netherlands Development Organization (SNV) is a multicultural development agency, based in The Netherlands and operating internationally. SNV works in 28 countries in Africa, Asia and Latin America by supporting local organizations to develop and improve their capacities. Our mission is to fight poverty. Poverty has many dimensions-economic, social and political. It is not just a lack of income; it is also a lack of access to and control over the means of production, insufficient participation in the political process and inadequate social services. We believe that fighting poverty requires action at many levels; at the national level, in the field and at the level in between (Mesolevel).

SNV/Nepal Netherlands Development Organization
P.O. Box 1966, Kathmandu, Bakhundole, Patan, Nepal
Tel.: 5523444
Fax: (977-1) 5523155
E-mail: snv@snv.org.np

Printed by:
Nawakshitij Offset Press & Suppliers
Tel.: 4477257, E-mail: nkops@wlink.com.np

ii
Chapter 1

INTRODUCTION

1.1 Background

Until recently, community-based forest management regimes in Nepal have tended to focus on protection and meeting subsistence needs. However, there is an increasing recognition that forest-based enterprises have the potential to contribute to better management of natural resources, provide income and employment opportunities to poor and disadvantaged groups, and facilitate the country’s economic development. A number of factors have contributed to this including: the regeneration of forest areas, greater willingness on the part of local forest managers to experiment, and policies which promote income generation from forest products. The Government’s Ninth Five Year Plan, in particular, emphasizes the use of non-timber forest products (NTFP) for poverty alleviation.

In late 1999, the International Fund for Agricultural Development (IFAD) initiated a series of multi-stakeholder discussions on forest resource promotion. A series of meetings was held to better understand programs that were already underway and identify gaps in current practices to provide ideas for possible approaches and strategies for future program interventions. During these discussions, it was recognized that there was inadequate understanding of the impact of and lessons learnt from current CBFE initiatives.

Before making any fundamental suggestions for new programs, it is critical to understand how the on-going initiatives in the country have evolved, what impact they have had on people and the resource base, and what can be learnt from them. This study assesses present and past CBFE initiatives, focusing on ways of generating economic opportunities and conserving forestry resources. The study analyzes the context in which these enterprises were developed and the relative efficiency of their enterprise modalities in realizing the developmental goals of sustainable and equitable economic development. The types of enterprises studied include: enterprises that promote timber and related wood products, fuelwood enterprises, fodder enterprises, and a variety of NTFP enterprises.

The study draws some broad guidelines and makes specific recommendations for new programs focusing on enterprise development and poverty alleviation. It is the first systematic analysis of existing community-based forestry enterprises in Nepal. Through this analysis we have identified certain critical issues and extracted lessons which can be used as tools in the development of future programs.
1.2 Objectives of the Study

The study had the following objectives:

- Review the existing types/modalities of CBFE in Nepal and document representative cases focusing on socio-economic factors, ecological factors and the dynamics related to the genesis, operation, and growth of CBFEs
- Analyze factors affecting the success or failure of CBFEs
- Assess the impact of CBFEs on economic efficiency, social equity and ecological sustainability
- Suggest possible strategies for new programs with a focus on small scale CBFE development

1.3 Methodology

A case study approach was utilized to undertake a comparative analysis of 11 enterprises. The map on the following page shows the location of each enterprise. Five enterprises are examined in greater detail while the other six are used to illustrate specific points and issues. In order to ensure a cross-section of experiences broad enough to make informed recommendations, the enterprises were chosen to represent a range of:

- Ownership options (sole, group, cooperative, private limited company)
- Geographic locations (Jhapa and Ilam in the East up to the district of Baitadi in the West), and elevations (Terai, Middle Hills, High Mountains)
- Product types (timber, fuelwood, fodder/forage, and other NTFPs such as paper, essential oils, broom-grass, and fibers)
- Property rights regimes over land on which raw materials are produced or gathered (private, common, national)

In this study, an “enterprise” is defined as an organized economic activity for the purpose of earning profits. Organized economic activities may include the collection of forest products for sale, processing, trading, transporting, and manufacturing undertaken either formally or informally. The study focuses on community based enterprises, which are defined here as enterprises being operated in rural areas, usually near a resource base that supplies raw materials, and that are planned and operated by local communities or individuals who are also the main beneficiaries. The study excludes large, private or government owned enterprises such as The Timber Corporation of Nepal (TCN), Dabur Nepal and, Herbs Production and Processing Company Limited (HPPCL). These larger enterprises are referred to as the forward links to the community based forest enterprises.

The conceptual framework which guided the study is explained in Table 1. The framework outlines the three focus areas of the study, their boundaries, and the research questions.
Introduction

Table 1. Conceptual framework of the study

<table>
<thead>
<tr>
<th>Key concepts</th>
<th>General categories</th>
<th>Research questions*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors/dynamics related to the genesis, operation and growth of CBFE</td>
<td>Socio-cultural Policy Technology Market/Economy Resource/Ecology</td>
<td>2. What supportive and hindering factors exist in the domain and how do various enterprise modalities/types cope with them?</td>
</tr>
<tr>
<td>CBFE types &amp; modalities</td>
<td>Ownership structure Scale of operation Property rights regimes over land on which raw materials are produced or gathered Product type Management structure/institutional set up Technological sophistication Target market Seasonality and length of operations</td>
<td>1. What enterprise modalities exist and how do they operate?</td>
</tr>
</tbody>
</table>
| CBFE effectiveness: economic efficiency, social equity and ecological sustainability | Raw material extraction and conservation of forest ecosystem Fuel use efficiency Pollution and wastes Income and employment of local people Taxation and government revenue Distribution of benefits Other externalities: positive, negative | 3. Which modalities have better prospects in creating desirable changes?

4. What are the implications for outside interventions? |

*The question numbers in the third column follow logical sequence of inquiry.
The first stage of the study was to identify community-based forest enterprises by forest product type (timber, fuelwood, fodder and NTFPs). The CBFEs were then categorized according to issues such as ownership structure, scale of operation, property rights regimes (such as private, common and public), management structure/institutional set up, technological sophistication, target market, and seasonality and length of operations. Forty enterprises were selected and the information was collected using a checklist (see Annex 1). A brief description of the products referred to in the case studies can be found in (Annex 2). The primary criteria for selecting cases were that:

- the enterprise covered many different issues,
- each enterprise represented a different ownership type or modality,
- within an ownership modality, the enterprise had completed at least four cycles of production and sale, and
- the enterprise had fairly accurate and easily accessible documented information.

Five older cases were selected since they offered greater opportunities to reflect on a wider spectrum of issues and perspectives. Six othershort cases were selected to illustrate specific lessons and insights into various socio-economic and ecological contexts within Nepal. Together these 11 cases provide a comprehensive picture of the different CBFE scenarios playing out in Nepal.

During the second stage, a checklist was developed to collect information for the selected enterprises (Annex 3). Information was gathered through review of documented sources (such as project reports, business plans, and enterprise and FUG records), field observations, key informant interviews, and focus group discussions. The key informants interviewed were the entrepreneurs, enterprise managers and staff, raw material suppliers, and concerned staff of facilitating organizations. Focus group discussions were held with enterprise management committees and enterprise beneficiaries. The enterprise related experiences of study team members also added strength to the data collection and analysis.

Cases were first analyzed individually, based on the research questions. The presentation of cases include a basic description of various aspects of enterprise (background, natural resource management, enterprise activities, and economic opportunities) followed by analytical observations, and specific lessons and implications.

From this, a comparative analysis was done focusing on enterprise modalities. Finally, lessons were extracted by understanding factors that affect the genesis, operation, and growth of enterprises, as well as the consequences of enterprises on economic efficiency, social equity, and ecological sustainability. Each member of the study team was responsible for analyzing and writing-up individual cases and the team met frequently to develop a common format and process for the case writing and analysis.
Community Based Enterprise Coverage in Nepal
Community Based Forest Enterprises in Nepal

Introduction

Study Location and Description of Cases
Chapter 2

ENTERPRISE MODALITIES AND CASE STUDIES

2.1 Overview of Community-Based Forest Enterprises

A total of 40 community based forest enterprises (CBFE) were identified at the beginning of the study. An overall review of these CBFEs are summarized and presented in Annex 1. In general five ownership structures and 14 product lines were investigated. The ownership structures investigated make up the primary ownership options in Nepal and include:

1. **Sole enterprises**: Enterprises primarily owned and managed, with or without formal registration, by an individual or a household.

2. **Forest user-group (FUG) enterprises**: Individual FUGs, leasehold groups or other community groups managing forests as a common property resource and producing, selling or distributing forest products.

3. **Consortium of FUGs**: Two or more FUGs working together for the collective production and marketing of forest products.

4. **Cooperatives**: Formal or informal networks of individuals and groups collecting, processing, and trading forest products.

5. **Private limited companies**: Corporate entities registered as per prevailing company legislation in Nepal which at present allows a maximum of 50 shareholders.

Table 2 shows the major product lines that CBFEs produce which include timber (sawn timber, furniture, logs, and poles), other wood products (handicrafts, carvings, implements), fuel wood and charcoal, plant fibers (Lokta paper, ropes and cloth from Allo, Hemp, Bhimal, Bhorla, and Argeli whiteskin, Sabai grass), medicinal plant products, traditional medicines, essential oils, food and spices, brooms, bamboo and rattan products, fodder and grass, leaf products (plates, handicrafts), pine resin, and others (soap nuts, incense, natural dyes). The geographic locations of the selected CBFE cover all the major ecological zones of Nepal (Terai, Hills and Mountains).
Table 2. Commonly found forest product lines and types by enterprise modalities

<table>
<thead>
<tr>
<th>Ownership modalities</th>
<th>Product types</th>
</tr>
</thead>
</table>
| **1. Sole**          | Timber (furniture, logs and poles)  
|                       | Other wood products (handicrafts, carvings, implements)  
|                       | Fuelwood and Charcoal  
|                       | Plant fibers (Lokta paper, ropes and cloth from Allo, Hemp, Bimal, Bhorla, Sabai grass)  
|                       | Medicinal plant products  
|                       | Traditional medicines  
|                       | Essential oils  
|                       | Food and spices  
|                       | Brooms  
|                       | Bamboo and rattan products  
|                       | Fodder and grass  
|                       | Leaf products (plates, handicrafts)  
|                       | Others (soap nuts, incense, herbal dyes) |
| **2. FUG enterprise**| FUG Timber (sawn timber, furniture, logs and poles)  
|                       | Fuelwood and Charcoal  
|                       | Plant fibers (Lokta paper, Argeli whiteskin)  
|                       | Medicinal plant products  
|                       | Essential oils  
|                       | Brooms  
|                       | Bamboo and rattan products  
|                       | Fodder and grass  
|                       | Leaf products (plates, handicrafts)  
|                       | Pine resin |
| **3. Consortium of FUGs**| Timber (sawn timber)  
|                       | Plant fibers (Lokta paper)  
|                       | Medicinal plant products  
|                       | Essential oils |
| **4. Cooperative** | Plant fibers (ropes and cloth from Allo)  
|                       | Medicinal plant products  
|                       | Food and spices  
|                       | Leaf products (plates, handicrafts) |
| **5. Private limited company** | Timber (sawn timber)  
|                       | Plant fibers (Lokta paper, Argeli whiteskin)  
|                       | Essential oils |
Enterprise Modalities and Case Studies

Of all these enterprises, Table 3 shows the ones which were identified as representative and therefore selected for description in the case studies in this study. The 11 cases have been grouped into ownership modalities as can be seen in Table 3. Each CBFE is analyzed using a similar framework and includes a basic description of various aspects of the enterprise (background, natural resource management, enterprise activities, and economic opportunities) followed by analytical observations, and specific lessons and implications.

Table 3. Selected CBFE cases by ownership modalities

<table>
<thead>
<tr>
<th>Ownership</th>
<th>CBFE cases for in-depth study</th>
<th>Other CBFE cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sole</td>
<td>Lokta Handmade Paper, Producer, Naglibang, Parbat</td>
<td>Cash Crop Producer and Trader, Kolbung, Ilam</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large Cardamom Producer, Dhanmane, Ilam</td>
</tr>
<tr>
<td>2. Forest user group</td>
<td>Shankamagar FUG, Rupandehi</td>
<td>Kankai FUG, Jhapa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Janaki FUG, Dadeldhura</td>
</tr>
<tr>
<td>3. Consortium of FUGs</td>
<td>Chaubas Wood Processing Enterprise, Kavre</td>
<td></td>
</tr>
<tr>
<td>4. Cooperative</td>
<td>Allo Cloth Production Club, Shankhuwasabha</td>
<td>Praja NTFP Cooperative, Chitwan</td>
</tr>
<tr>
<td>5. Private limited company</td>
<td>Humla Oil Private Limited, Humla</td>
<td>Malika Handmade Paper Private Limited, Bajhang</td>
</tr>
</tbody>
</table>
2.2 Sole Enterprises

2.2.1 Lokta Handmade Paper Producers, Naglibang, Parbat

a. Background

Traditional Nepali paper made from Lokta (Daphne bholua) has been used for a variety of purposes including Horoscopes (Cheena), contracts (Tamasuk) and as official government paper (Tippani). Today, Lokta paper has gained popularity in the West and is used for a range of stationary products.

As demand from the West increases, indigenous paper making presents both opportunities and challenges for those who are involved in this business. This case study provides an overview of the social, economic and environmental impact created when alliances are made among harvesters, producers, and companies.

Naglibang VDC has always been renowned for the quality of its hand-made paper production. Traders from Tibet and Kathmandu have been coming here for more than a century to purchase the paper. In fact, some Newar traders settled here permanently. With the advent of a motorable road connecting Naglibang to Beni, Myagdi, and Pokhara, Lokta has become a major product.

The Bhaktapur Craft Printer (BCP), established an office in the area in order to capitalize on local papermaking experience and at the same time to help improve the income levels of the papermakers. Later BCP helped rural people with papermaking technology, provided loans through Small Farmers Development Project (SFDP) and provided a market guarantee for the hand-made paper produced by the farmers.

Lessons learned

- Alliances between harvesters, producers, and companies are partnerships that should be cultivated.
- Where there are Forest User Groups, alliances should also be made with them to ensure resource sustainability and local involvement.
- Equity needs to be taken into account when working with local groups. Often the poorest groups are edged out by the local elite and this should be monitored carefully.
b. Resource Management

The primary resources for making hand-made paper are Lokta and firewood. Naglibang VDC had good stocks of both. According to the BCP plan, Lokta harvesting was supposed to be on a rotational basis, moving from one VDC to another each year. After the eighth year of harvesting, the first VDC would receive a second permit for harvesting. The district forest office provides a permit to BCP for Lokta harvesting in the specified blocks. BCP then distributes permits (Purji) to local harvesters.

The rotational harvesting system was designed to permit Lokta regeneration and growth, but unfortunately has had some unintended consequences. Since demand was high, both the producers and the collectors quickly started harvesting in a wanton fashion with little concern for the resource base. Not surprisingly, the stocks within the area were completely depleted within a short time. In some areas there is not even a single plant left in some of the prescribed blocks of the management plan.

Now the collectors and paper makers face serious problems because they have to walk for two to three days to collect Lokta bark, and communities with remaining Lokta stocks are restricting the access of outsiders, including the paper makers of Naglibang, to Lokta forests.

Another problem was the lack of tenure provided to local communities over the resource. BCP was given exclusive rights to buy the Lokta over the whole Dhaulagiri region by the Department of Forests up until 2001. With little incentive to conserve for the future, the Lokta harvesters extracted the bark in ways which destroyed the trees and maximized the amount of bark produced.

Seeing the rapid deforestation that took place, people have begun to understand the necessity for better management and are seeking community-based approaches to manage the forests, including Lokta, through community forestry. The DFO and Nepal UK Community Forestry Project are now helping communities prepare management plans for Lokta and firewood and they are lobbying BCP for increased benefits to producers.

c. Paper Making Enterprises

BCP reasoned that the most appropriate way to support improved incomes of poor farmers was to focus on the household level and to assist small production units. In this VDC, about a hundred groups were formed and those who joined were eligible to receive a loan through the Small Farmers Development Project (SFDP) of the ADB. It quickly became apparent that those who joined a group were more interested in the loan than actually using it to develop a paper-making enterprise.

Most of the original groups are no longer functional but some individuals are still engaged in papemaking. Because they were never formally registered in the
Community Based Forest Enterprises in Nepal

district administrative office they have no access to credit or support services other than from BCP or SFDP.

Processing and Production

Paper making is a very simple enterprise. Everyone is involved. Rich, poor and other occupational castes have an equal opportunity to make paper. Generally, the men harvest the Lokta bark and the women grade and pack it.

Some producers complain that only rich paper makers have the means to store large amounts of Lokta bark and thus can make paper all year. Poor farmers are unable to do so because they lack working capital. The scarcity of firewood has added to production cost.

Marketing

Sheets of paper are grouped in Kori (1 kori = 200 sheets). Each Kori is packaged in clean cloth or plastic and then handed over to BCP. Every year, about 100-200 Koris are sold to BCP by each individual producer. BCP has categorized paper into three grades: ‘A’ grade (40 gram), ‘B’ grade (30 gram), ‘C’ grade (20 gram). The farmers have one more category, which is grade ‘D’ (no fixed weight).

The plain handmade paper is sold to BCP at the following rates and is normally revised every two years. The 1999 rates were: NRs 9 for ‘A’ grade paper, NRs 7.50 for ‘B’, NRs 5.50 for ‘C’, and no fixed value for ‘D’.

Producers lack information on consumer preferences and quality requirements. BCP guarantees to buy the paper so producers have few alternatives to look for othersellers. Moreover, BCP advised producers to make odd size papers, thereby limiting their chances, if they had any, to sell to other buyers.

BCP produces envelopes and several other finished products for sale both domestically and internationally. The papermakers feel they receive inadequate prices from BCP, suspecting that BCP earns a lot from exports and pays low prices to producers. BCP markets the paper through UNICEF where they have buyers in Geneva, Germany and other western countries.

Financial Aspect

The papermakers need to prepare or buy some equipment such as plastic pipes, drums for collecting water, cooking pots, wooden frames, clean cloth, etc. The lump-sum start up capital needed to establish an individual enterprise is NRs. 12,000.

The SFDP provides a loan to paper makers at 17-18% interest rate on the basis of targeted paperweight with a range of 100-300 kg. Farmers must repay the loan on a six-month installment basis. If the paper makers are unable to repay the loan, there is a risk of ADB selling their land property at auction. Now there are about 150 farmers whose land property is in the process of being sold by SFDP at auction.
Due to the small margin on profits, some producers complained that they have to work at least fourteen hours a day during the production season and yet receive only a trivial return, which is not even adequate to repay the loan to the SFDP.

**Support to Paper Producers**

BCP provided producers with various training and support to improve production and quality. They also prepared a rotational harvesting plan for Lokta and provided harvesting training to the collectors from several villages, including Naglibang. Since Lokta collection rotates, the quota for the paper to be produced by each household in the producer group is fixed before actual production starts.

According to their staff, BCP invests a significant part of its profit (30-40%) back into community development activities such as: drinking water, toilets, and public buildings. The DFO at Baglung suggests that BCP invest some profit in Lokta resource management activities to support community forestry.

One producer who made paper before BCP arrived became a trainer to others. He and others now find themselves left jobless since having trained others.

**d. Observations and Lessons**

The Lokta paper making enterprise in Naglibang is contributing significantly to the individual paper producers and collectors. The enterprise has created a market for fuel wood in the village. The enterprise has also contributed to the transformation of indigenous technology and the development of entrepreneurial skills.

One lesson learned about the sole enterprise development model is that some issues like equity and linkages to sustainable resource supplies must be addressed. It has been noticed that sole enterprise as a modality does not create much incentive for the equitable distribution of benefits and resource conservation.

Marketing is very important and BCP’s long experience in product development and international marketing can be of great help to local producer groups. Strategic alliances with enterprises like BCP are crucial to the success of such small scale enterprises.

Since BCP holds sole buying rights, little thought was given as to the role of the Forest User Groups. This has resulted in wanton harvesting and little monitoring or support from local groups. Thus, community involvement in resource management is very important for sustainable resource supply and there should be strong linkages between resource management and enterprise development.
2.2.2  Cash Crop Producer and Trader, Kolbung, Ilam

a.  Background

Far Eastern Nepal is famous for a range of NTFPs including tea, ginger, and large cardamom. As markets are opened up by new roads and trading opportunities, forest and agricultural products are creating better returns for farmers and local forest management groups. The following case study describes on-farm opportunities created by such new developments and how this has spurred on innovation among farmers in the Far East of Nepal.

Devi Aryal lives in Kolbung VDC in Ilam district which borders West Bengal, India. He is of the Brahmin caste and his family has lived in this area for seven generations. He has 143 ropanis (20 ropani = 1 ha) of land on a south-facing mountain slope composed of terraced (locally known as Bari) as well as sloping land (Pakha). He has divided the land into seven blocks (see table 4). The terraced land adjoining the homestead is allocated for ginger and potato. Below this are areas for tea, which will be expanded further, thatch grass patches and Amriso (broom grass). Mr. Aryal has also planted bamboo and an Alnus woodlot.

In 1984, Mr. Aryal considered to sell his land for NRs. 20,000 to move down to the Terai as he did not have any scope for farming subsistence crops such as maize and millets since the production barely met his family needs. Fortunately, some innovative neighbors suggested that, with the opening of market outlets to Jhapa and Indian cities, he move toward cash crops. Currently (2002) his land is worth more than NRs 2.5 million.

His eldest son has also decided to return from school to join him on the farm rather than going for other service. His son now wishes that he had studied agriculture to enhance what he has already learned from his father.

<table>
<thead>
<tr>
<th>Land use</th>
<th>Area (Ropanis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tea</td>
<td>45</td>
</tr>
<tr>
<td>Amriso (broom grass)</td>
<td>70</td>
</tr>
<tr>
<td>Jot Bari (ploughable terraced land)</td>
<td>15</td>
</tr>
<tr>
<td>Alaichi (large cardamom)</td>
<td>7</td>
</tr>
<tr>
<td>Thatch grass + Bamboo + Amriso</td>
<td>6</td>
</tr>
</tbody>
</table>
b. Enterprise Activities

Mr. Aryal is engaged in several activities, both on and off the farm including: ginger, broom grass, tea cultivation, livestock farming and large cardamom cultivation.

Ginger Cultivation and Trade

The Aryal family both produces and trades in ginger. He gets a margin of roughly NRs 50 per quintal, though the trade is very much affected by the Indian market. He provides ginger seeds (1 man = 40 kg) and monetary loans to needy farmers, and in return collects ginger after it is harvested. He does this both for financial gain and as a means of social support within the village. He also gives technical advice to other farmers.

Tea Cultivation

It takes about 5 years to establish a tea crop. Once established, a regular yield can be maintained for about 70 years with little cost (excluding the opportunity cost of the land). The annual net cash inflow of NRs 2,070 returns the entire initial investment in about 4.5 years. Mr. Aryal vividly summarized, “a tea farmer with 100 ropani can be a car owner’.

The high initial investment (about NRs. 9,000) before returns make it difficult for poor farmers to wait until returns accrue. Loan provisions could facilitate poor farmers to engage in cultivation. Unfortunately, procedures for obtaining loans are cumbersome and discourage the most needy farmers from applying. Because of this, poor farmers are less prepared to opt for a bank loan. Many in Kolbang explained that the bank loan leads to bankruptcy rather than profits.

Rats are becoming a major pest in the tea fields and the current methods available for controlling them are not effective. Farmers want technical support in this regard.

From a processing standpoint, competition is improving both the prices and quality. Earlier, there was only one government-owned factory at Kanyam, some 15 kilometers from Mr. Aryal’s farm. Now, two other factories have been established, one of which is managed by a tea-producers’ co-operative. This means that the tea-buyers compete with each other for tea leaves produced by farmers. As a result, the farmers feel more secure in respect of marketing the tea leaves. In addition, villagers indicated that the tea processed in Ilam goes mostly to Japan which could ensure improved access to future markets.
Large Cardamom Cultivation

Mr. Aryal has limited land suitable for large cardamom, which requires swampy but well-drained soil with plenty of water. In addition, highly fluctuating prices has discouraged him from opting to expand large cardamom production. The price in 1999 was almost triple the price in the previous year. There are chances that the price could go down over time. The main problem here is the lack of appropriate market information.

Livestock

Mr. Aryal has two “improved” cows, which give around 15 liters of milk each day. While a small fraction of the milk is consumed at home, the rest is sold to a local dairy.

c. Observations and Lessons

Devi Aryal has made substantial economic progress over the past fifteen years. He refrained from migrating to the Terai in the early days and with increasing economic opportunities he has made a good living in the hills. His annual income, as well as the value of the land, have risen many fold, and he feels that he is better off here than if he migrated to the Terai.

Construction of roads and the consequent opening of market outlets have been crucial to the success of Mr. Aryal. If appropriate opportunities are created, social stability can be supported by creating job opportunities in the village, rather than the young seeking to move to major city centers or the Terai.

If marketing infrastructure exists, innovative farmers may start marketing agricultural and forest products on their own. The way Mr. Aryal was influenced and is influencing others in developing enterprises indicate that supporting a few innovative entrepreneurs may have great impact. New forest resource promotion programs should emphasize this as one of the strategies to facilitate enterprise development.

The gestation period (for return on investment) requires that lending facilities be made available and accessible to farmers, especially the poorest farmers. Subsidies or financial services are essential to encourage long-term profitability. For all types of small-scale enterprises, technical and market related services might improve the enterprise performance. NGOs, local government organizations or financial institutions would take this area as a project activity.
The successful enterprise experience of Devi Aryal suggests that if opportunities are created in the hills, people may not move down to the Terai and cities. This may help reduce regional imbalances that are one of the key areas of concern for the Nepali people.

2.2.3 Large-cardamom Producer, Dhanmane, Ilam

a. Background

This case study shows an innovative attempt to provide the poorest of the poor with opportunities to improve their household incomes through the leasing of community forest land to individual members.

Bhim Magar is a member of Dhanmane FUG in Ilam district. He has three daughters, one son and his wife. He is considered a landless person (Sukumbasi) and has made a small hut on a piece of land borrowed from his uncle. He has an agreement with the FUG committee which allows him to cultivate large cardamom in the community forest (Dhanamane FUG, 1999).

Mr. Magar is also a carpenter, and can find employment from this for about three-quarters of the year. Dhanmane FUG and the community members employ him for wood work. He can earn about NRs 120 per day. He also collects large cardamom and oranges in the village to sell at the road head.

b. The Enterprise

He planted large cardamom on about five ropanis of forestland. Large cardamom starts yielding after three years. Farmers say that large cardamom can be planted in the forest two seasons a year - June and September. Weeding has to be done two times a year (Dhanamane FUG, 1999). Harvesting is done in August. Large cardamom flowers in February-March.

Lessons learned

- “Leasing” community forest land back to FUG members can provide the poorest with improved livelihood opportunities.
- In turn, new conflict resolution mechanisms are needed to allow everyone to see the benefits of such an approach.
- Farmers and entrepreneurs should have multiple sources of income, rather than relying on one source.

Photo credit: NACRMP
Enterprise Modalities and Case Studies

(Dhanamane FUG, 1999). At this time mice are a great nuisance. Weeding in June is essential for cleaning fallen leaves and twigs from the large cardamom plant.

In Dhanamane community forest the yield is about 20kg per ropani, but in a well-managed private land it reaches up to 40 kg per ropani. The green weight to dry weight ratio is at 5:1. His annual net income/Ropani is NRs 8,875 to 26,875. Price was not constant and predictable but it has never been so low as to be non-profitable.

Mr. Magar pays the FUG NRs 200 for each ropani of large cardamom (Dhanamane FUG, 1999). Even with unfavorable prices, the cultivators like Bhim Magar can earn about NRs 2,000 per ropani, which equals NRs 6,000 per year in total. According to Mr Magar, this amount is enough for buying rice for three months.

Large cardamom is profitable but competes with forest crops, and as such it contradicts forest regulations. The market prices are generally good but they are very unpredictable.

In addition, the irrigation for large cardamom in the community forest is limited. A small canal can be made from some distance away, but is costly for the small producer given the high costs of labor and lack of financial resources. Besides, he may not opt for investing so much in a communal forest, where his rights are defined only for a limited period and FUG reserves the right to relocate that part of the forest land to any other users for the same or any other use.

Till now the group has decided to lease the land to him. Recently, other users have raised the issue that since they also have equal rights over the communal forests, the privileges to cultivate large cardamom should not be given to certain individuals but shared by all on a rotational basis.

c. Observations and Lessons

Bhim Magar has been given a part of common forestland by the FUG for cultivation of large cardamom. This has been a great economic opportunity for him and indicates that, given the right opportunities (both financially, skill wise and resource wise), landless people can improve their livelihoods. It is important to note that he is not reliant on just one source of income but has multiple sources of income.

Large cardamom production may be enhanced if irrigation facilities and start up finance for buying seedlings are made available.

FUGs can mobilize communal resources for the benefits of the poor if appropriate opportunities exist in the forest ecosystem in the prevailing socio-economic environment. However, appropriate institutional support will also be needed to ensure that better-off FUG members appreciate equity and long term benefits of such arrangements. This is particularly important as the conflict over forestland grows as resources mature.
However, community leaders need to be equipped with the necessary skills to cope with counter equity interests and forces such as those emerging in the Dhanmane community. This opens up an innovative twist to community forestry: providing opportunities to allocate parts of the community forest back to FUG members.

2.3 FUG Enterprises

2.3.1 Shankamagar FUG, Rupandehi

a. Background

The Shankamagar FUG was the first group to be handed over forest management responsibilities in Rupandehi district. It is situated in Shankamagar Village Development Committee (VDC) in the central Terai of Nepal, 5 km southeast of Butwal.

Before the transfer of authority to the FUG, the forest was under tremendous pressure from squatters who were rapidly squeezing the forest from all sides. The DFO had virtually no control mechanisms. Residents of Shankamagar VDC had made several attempts to get involved in protecting the forest, but their appeal could not be considered at the district level.

In 1989, King Birendra was on an official visit to the western region, and visited both Butwal and Shankamagar. The local villagers took this opportunity to appeal to the King and asked him to direct the forestry authorities to transfer the right to manage the forest to them. Convinced by the people’s appeal, the King issued a special order to the Regional Forest Directorate to hand over the forest as per the prevailing rules and regulations.

After a lengthy process, 549 ha of forest (156 ha of plantation and the rest natural forest) was handed over to the group in 1989 (Shankamagar FUG, 1999). The group began by undertaking plantations of species like Sissoo (Dalbergia sissoo), Khair (Acacia catechu), Masala (Eucalyptus spp), Ipil-ipil (Leucaena leucocephala) and Casia simea. This was done after evicting 3600 households that occupied the forest.
land illegally. At that time community forestry was governed by Panchayat Forest (PF) and Panchayat Protected Forest (PPF) regulations. The forest was handed over originally as PF and PPF. Only in 1996, the status was changed into Community Forest following the change in the government rules in 1990. (HMG/N, 1993, HMG/N, 1995).

All 1,889 households in Shankamagar VDC are part of the FUG. The caste breakdown is: Brahmin (50%), Gurung and Magar (25%), Chhetri and Thakuri (20%) and others (5%) (Shankamagar FUG, 1989). The majority of the users are dependent on agriculture (70%) followed by business (25%). About 50% of the household heads are retired army personnel from the Indian or British services (Shankamagar FUG, 1999). Despite the legal provision that FUG formation should include those who use the forest, irrespective of political boundary, membership is restricted to those living in the VDC only. As a result, the people living near the forest are now excluded from the group.

The Executive Committee (EC) consists of the Chairman, Vice-chairman, Secretary and Treasurer and is selected by consensus among major parties. Each of the nine wards of the VDC elect one person to represent them on the FUG committee. An additional five members are nominated by the chairman from user households. Altogether, there are 17-18 members in the Committee, with a two-year term (Shankamagar FUG, 1999). If there are more than one candidate for a post (which is a rare case), the FUG members decide vote. While there are two women members in the Committee, there is no representation from the lower caste men and women (Shankamagar FUG, 1999).

The users have delegated their authority to the EC, and the chairman has tremendous power. Consequently, he has been able to create conditions for effective management of forests and satisfaction of user needs. Being a man of retiring age, he has little political ambitions and is wealthy with plenty of land and buildings.

Because there is broad representation from different interest groups, there is very good co-operation between FUG and VDC. This has stemmed potential conflicts between FUG and the VDC (which has been reported in some areas in the Terai). They have also received a good deal of support from the Federation of Community Forest Users in Nepal (FECOFUN).
b. Natural Resource Management

After almost ten years of community control, the overall condition of the forest has significantly improved (Shankamagar FUG, 1999). The villagers actively manage their forest through plantation, thinning, pruning, and nursery management. Dead, dying or diseased trees are removed and are graded according to their quality and used for timber and fuelwood (Shankamagar FUG, 1999).

Block-specific stocking is taken as part of the forest management plan and prescriptions are made for each block on a yearly basis. Plantation on the periphery of the forest is done every year as a ceremonial activity. Barbed wire fencing protects the plantation. Yet the plantations have not performed well. There appears to be limited technical skills in selecting suitable species and regeneration techniques on the part of FUG. The FUG has established a nursery but it has not been well managed since many were discouraged by the plantations’ performance. On a bright side, the natural Sal is passing fast through pole stage and is a great hope for the users.

c. Economic Opportunities Created by the FUG

FUG has improved the users’ well being through a direct and cheaper supply of forest products, employment, and various social and philanthropic services. The committee controls the production, distribution and sale of a range of forest products and user households can buy them at a nominal rate compared to the market prices.

The FUG raises a significant amount of money from the sale and distribution of forest products and services. In 1998, the group collected about NRs.1.8 million, and financed several socio-economic activities in the VDC as well as the nearby areas. The Table 5 indicates that the major source of revenue is from sale of timber, poles and firewood (67.8%) (Shankamagar FUG, 1999). The income from these sources are also increasing every year Shankamagar, FUG 1999.

The FUG is thinking to establish a sawmill so that they can add more value to their wood and also make the price cheaper for the users. Likewise, a small tractor may greatly reduce the cost of transportation and hence benefit the users. This is why the committee is exploring this possibility in greater detail.

Apart from selling the forest products, the FUG also generates money from various other sources like visitors’ fees, lectures, penalties and offenses, and the membership fees (Shankamagar FUG, 1999).
Enterprise Modalities and Case Studies

Table 5. Source of income for the last three years in Shankamagar FUG, Rupandehi 1998

<table>
<thead>
<tr>
<th>Products</th>
<th>1994-95</th>
<th>1995-96</th>
<th>1996-97</th>
<th>Total (NRs)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber, pole &amp; fuel wood</td>
<td>163,235</td>
<td>238,693</td>
<td>338,693</td>
<td>740,549</td>
<td>67.8</td>
</tr>
<tr>
<td>Grass</td>
<td>2,951</td>
<td>-</td>
<td>2,700</td>
<td>5,651</td>
<td>0.5</td>
</tr>
<tr>
<td>Seedlings</td>
<td>6,522</td>
<td>4,770</td>
<td>12,472</td>
<td>23,764</td>
<td>2.2</td>
</tr>
<tr>
<td>Entry fee</td>
<td>475</td>
<td>2,000</td>
<td>2,600</td>
<td>5,075</td>
<td>0.5</td>
</tr>
<tr>
<td>Penalty</td>
<td>8,845</td>
<td>2,165</td>
<td>1,250</td>
<td>12,290</td>
<td>1.1</td>
</tr>
<tr>
<td>Membership fee</td>
<td>4,200</td>
<td>15</td>
<td>125</td>
<td>4,340</td>
<td>0.4</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>95,182</td>
<td>70,603</td>
<td>134,191</td>
<td>299,976</td>
<td>27.5</td>
</tr>
</tbody>
</table>

Total                                281,410  318,276  491,959  1,091,645  100

Source: Adapted from Pokharel et. al (1998).

Employment

The FUG employs seven staff: one office secretary, five forest watchers, and one nursery foreman (Shankamagar FUG, 1999). The FUG hire users for felling, limbing, and hauling operations at a rate of NRs 60 per day for harvesting and NRs 20/person for loading and unloading. Tractors are hired for transporting the products to the depots. Forest technicians supervising the activities receive NRs 80/day as payment for their services.

The FUG committee members also get allowances for committee meetings (125/day), and the DOF staff are also paid for their services (Rs 80/day) (Shankamagar FUG, 1999). This has compensated the cost of time for community members and DOF staff who may not get daily allowances for field activities in community forestry from their office. In this way, community forestry can be self-sustaining.

Other Socio-Economic Services

The FUG has invested its money earned on a range of social and economic services to the users as well as neighboring communities. Some of the activities carried out include:

- Support to school (two high schools, one lower secondary, and two primary).
- Scholarships (6000/high school, 5000/lower-secondary primary).
- Biogas subsidy (1500 per household)
Enterprise Modalities and Case Studies

- Family Planning (with one or two girls from one wife: NRs 5000/family).
- Health services (as demanded by the local health post, necessary medicines are purchased and provided). Also contributes financially to Polio campaign etc.
- Election (provision of tents for voters).
- Relief for disasters.
- Skill development training (71 participants for six months through 3 teachers, 6 machines)

Distribution and Marketing

Firewood, poles and timber are available to users every Saturday from the FUG depot and another conveniently located site. Each household is eligible to get 3 quintals of firewood a week. For the users that cannot afford fuelwood at this rate, a separate provision has been made. Each person is issued tickets and charged NRs 1/household as an entry fee for collecting firewood. The users are allowed to collect dead, dying and diseased trees and poles under the supervision of the committee members. With this arrangement, a household can collect a maximum of 25 bharis (1.25 quintals) of firewood from the forest.

Also, a household can get 50 cft. of timber for housing construction if approved by the committee members. For distribution of grass, plots are delineated through lottery system and then allocated to the user on a lump-sum charge. The fencing and plantation activities have enhanced grass production in recent years, but the users fear the decrease in production with time as a result of crown expansion.

Non-FUG members are sometimes allowed to collect forest products. Shankamagar FUG also acquired round timber from another FUG and sold them to the FUG members at a profit. The FUG provides 50 cft. of timber free of charge to school, temples and other public institutions. There is also a provision of 50% discount for a funeral or religious practice.

Demand for Forest Products

There is an increasing demand for the forest resources of (Shankamagar FUG, 1999) since it is close to Butwal and Bhairhawa, two fast growing cities. The FUG estimates that 20,000-25,000 cft. can be sold annually at the current price levels (Shankamagar, FUG 1999).

Likewise, the demand for fuelwood is higher than it can be met Shankamagar FUG, 1999. However some users, when asked how much fuelwood they used replied that they depend less on fuelwood now and use alternatives such as kerosene and biogas. With the rise in the standard of living, users are likely to shift towards sources of fuel other than the fuelwood.
Enterprise Modalities and Case Studies

As far as the demand for grass is concerned, users feel that livestock will continue to be a prominent source of income in the years to come. It was learnt that a household could produce a maximum of 350 liters of milk a day. At present, only 1% of the total grass demand is met from the community forest (Shankamagar FUG, 1999). FUG members indicated that 5-6 trucks of milk are sold from the FUG households every day. Establishment of four chilling centers in the area and emergence of private milk processing companies have ensured the sale of milk. Despite this, current production levels are still inadequate and hence, milk is still imported from India.

d. Observations and Lessons

The overall community forestry process is more complex in the Terai than in the hills. Participation can be tricky here since the FUG consists of nearly 2000 households. Many of the activities and plans are designed and developed by the FUG, without much consultation with the general users. The perspectives of the poor, the landless and the disadvantaged may be different from those of committee members. It is still a question as to how such marginalized groups' perspectives affect FUG decisions and actions.

For instance, there has been increasing conflict between the users and the committee since grasslands are being converted into forestland. Institutionally, the FUG lacks true representation as it is usually the wealthy who set the objectives and rules for use.

Institutionally, leadership development, training and other organizational development aspects could strengthen the FUG. NGOs could contribute to this so that the FUG is more a representative and dynamic institution of local through which a range of development and resource management activities can take place.

FUG like Shankamagar can mobilize tremendous funds and so needs to have equitable distribution of benefits and the skills to manage the income generated. For this, the FUG may be trained on financial planning and community based micro-enterprise development. For specialized enterprise development services, government organizations such as IEDI, NGOs and private consultants may be invited through a program with the focus on enterprise development.

From an enterprise perspective, the FUG undertakes a range of enterprise activities taking into account the range of products the forest can provide. The enterprise activities represent a significant economic incentive. It contributes to social activities and generates employment. However, there is still a tremendous scope for improving forest harvesting, distribution and sale of forest products. Many dead and dying trees remain, and higher off-take could generate more economic opportunities.
Community forestry is generally considered for subsistence use and FUGs do not always receive support to move beyond this. Recent government orders restrict the commercial use of the forest. However, the income generation and needs of the FUG represent a great opportunity to reorient the forestry staff from that of a manager to a service oriented facilitator. The forestry staff would need to provide services and advice which are needed by the FUG. Training forestry staff on the economics of forest management may help them visualize the scope of management and utilization.

2.3.2 Kankai FUG, Jhapa

a. Background

Kankai FUG is located at Surunga VDC in the central part of Jhapa district in the eastern Terai of Nepal. The FUG was the first in the district to have control over their local forest resources within the structure of community forestry. The hand over process, however, was not smooth and was only the result of immense public and political pressure that a ministerial decision was made to transfer the right to the community in 1992.

It consists of all 1700 households (or 6700 residents) of the VDC (Kankai FUG, 1992). All members have been issued ‘green cards’ that allow them to enter the forest and harvest according to the operational plan Kankai FUG, 1999.

b. Natural Resource Management

The forest area is 227 ha, and is divided in the middle by the east-west highway (Kankai FUG, 1999). It is on the eastern bank of Kankai river on the sandy alluvial plains. For the purpose of management, the forest has been divided into three blocks: one south of the highway and the two on the north. The site remains dry for about nine months in a year, barring the period of monsoon. In the past few years, many of the trees at pole size and beyond have been uprooted by heavy storms (Kankai FUG, 1999).

The harvesting strategy is that only fallen trees are removed. The FUG established nurseries and carried out enrichment plantation, but this was not successful, as the area was too dry. They wanted to know more about the reasons of failure and so sent soil samples for testing to a near-by agricultural lab. Exotics such as Kapok were recommended for plantation, but all types of planted seedlings died.
The Kankai River has washed away a big chunk of the forest area, and every monsoon the users are afraid of the river flooding over their fields. In the past few years, the river has scoured approximately 50 hectares. The FUG has invested much from the money generated in creating embankments in order to save the forestland as well as the settlement. The group even hired one overseer for the technical supervision in river training, for which they charged the FUG NRs 15,000 for 13 short visits.

**c. Economic Opportunities Created by the FUG**

**Supply of Forest Products**

The trees uprooted by heavy storms in 1995 were collected by FUG and deposited at the FUG office complex. In 1995, 20,000 cft. of Sissoo wood was collected (Kankai FUG, 1999).

Unfortunately, they did not receive support from the MFSC to sell this wood. The group spent NRs 100,000 on sending representatives to the MFSC in Kathmandu for seeking sales permission. By the time they received a permit for auction sale, the wood was mostly rotten and few traders wanted to buy them. The price was reduced from NRs 351 per cft. to NRs 251, and yet the wood still could not be sold.

Since 1995, the dead wood collected has been distributed to members of the FUG at a subsidized price and given to the district forest product supply committee. The committee comprises of the chief district officer and local representatives from the major political parties. It is mandated to supply forest products to needy users in the district at subsidized rates.

**Financial Analysis**

The cost of extraction includes felling (NRs 3 per cft.), transport to the office depot (NRs 8/cft.) and loading and unloading (NRs 3/cft). This makes the total cost of NRs 14.75 per cft. landed at the depot at the FUG office at the roadside.

The selling price ranges from a minimum of NRs 117 to users and higher to district residents and traders. This indicates a net return of at least NRs 100 per cft., which is equivalent to 700% return on investment. This means that even when products are sold at subsidized rates, the financial position of the FUG is good.

**Creation of Income and Employment**

The FUG has generated more than NRs 6,000,000 in five years' period. At the time of the study (December 1999), the FUG had a cash balance of NRs 2,600,000 and a stock of Khair and Sisoo wood worth NRs 800,000 (Kankai FUG, 1999).

The FUG has helped create a number of economic opportunities and undertook several conservation activities including:
There are eight employees that include six watchers and two office staff. Committee members get NRs 75/day during meetings. The chairman and secretary get a monthly allowance of NRs 2000 each. This was passed by the general assembly (Kankai FUG, 1999).

The local demand for forest products has not been met entirely. People outside the user group also expect to get some products from this forest.

d. Observations and Lessons

The FUG management activities are still controlled by the DFO. Without consent from the forestry officials, the FUG does not make major decisions. Committee members and DFO differ in opinion and the priorities of DFO and the Executive Committee (EC) sometimes contradict one another. The DFO has difficulty to recognize river control as a forest development activity, while the group asked for permission for the allocation of funds.

Kankai FUG is suffering from ecological crisis in terms of plantation failure, floods and frequent uprooting of grown-up trees. The FUG has not been able to cope with this problem alone, and there is limited technical and financial support from other organizations. The role of DFO is not adequate and supportive.

These situations demand building the capacity of the FUG as a community based organization to develop natural resources and create economic opportunities. Technical services in forest management and river training help alleviate some of the problems.

The committee is largely made up of the wealthy and not all user interests are represented. Since this is a big FUG which has generated a lot of publicity, it is raising FUG awareness and confidence about FUG formation in the Terai. However, resources should be reallocated from fencing and repetitive plantation to income generation activities.

Support is also needed in evaluating alternative courses of investment of funds. Instead of discrete investment options, they may be encouraged to have a central enterprise that maximizes the returns to local user which is now difficult since the committee makes most of the decisions.

All such improvements are possible only through a carefully planned program that involves multiple stakeholder collaboration. The district FECOFUN and local NGOs could act as intermediaries and work closely with FUG and DFO.
2.3.3 Janaki FUG, Dadeldhura

a. Background

Janaki Community Forest User Group (FUG) is situated at Ashigram VDC in Dadeldhura district in the Far Western region of Nepal. The community forest covers an area of 318 hectares of pure forest of Chirpine as well as mixed stands of Rhododendron, Quercus, Myrica and their associates (Janaki FUG, 1997b). The FUG was formed in 1997 and is comprised of a total of 77 households (Janaki FUG, 1997a). The Brahmin and Kshatriya households form the majority of the FUG, with 10% of the members of lower caste. Despite poor economic conditions, most of the people are literate.

There are many NTFPs in the community forest, including: Sugandhawal (Valeriana jatamansi), Pakhanbed (Berginia ciliata), Bojho (Acorus calamus), Timur (Zanthoxylum armatum), and Jhyau (Pemella linctorum). Jhyau is the most abundant.

b. Economic Opportunities Created by the FUG

The Community Based Economic Development (CBED) Project began in 1998 to support FUGs to more actively manage and trade NTFPs found in their community forest. Exchanges, study trips and technical support was provided to a number of FUGs through CBED.

The members of the Janaki FUG participated in a number of study tours, exchanges and mass meetings sponsored by CBED. In 1999, CBED organized a study tour to Nepalgunj and Dhangadhi for the FUG leaders. The tour participants shared their experience with rest of the users attending the meeting.

After this the users were excited to begin enterprise activities. They amended their operational plan (OP) to introduce a provision to collect and trade NTFPs from their community forest.

In essence, the committee worked as a local trader. Harvesters of NTFPs, including women and children, collected various products and sold these to the committee. The committee then did some simple processing (such as cleaning, drying, and grading) to get better price from the Nepalgunj traders as well as to lessen the weight.

Lessons learned

- Technology selection & use need to be participatory from the beginning & adaptive as community learn.
- CBFE programs should focus initially in areas where basic marketing infrastructure already exists. This will enhance confidence in local institutions and enhance the visible affects
- Easy to access loans or other mechanisms are needed to encourage initial investments
- Direct training, cross visits and study tours for the users themselves are needed to instill confidence and enhance users' thinking on what is possible.
When the FUG began, they had only NRs. 3950 as their fund, which was not enough for initial start-up costs needed for processing and transportation (Janaki FUG, 1997b). Local leaders secured initial start-up costs from various sources as well as received NRs. 11,000 advance from Nepalgunj traders. In total, the FUG invested more than NRs. 40,000 for processing, packaging and transportation (see the table below for details). However, initial investments paid off as the FUG made more than NRs 60,000 as return.

**c. Natural Resource Management**

Due to the increased profits, there is now more discussion about active management of the community forest.

One important step was to carefully think about how to best balance conservation and income generation opportunities. The forest has been divided into five blocks and products are harvested on a rotating basis (Janaki, FUG 1997b). One block is fully protected from NTFP collection each year. Similarly, the FUG has banned cutting the branches of trees while collecting Jhyau and provided incentives to collectors for not harvesting all the products at one time. Both these practices have helped to ensure sustainable off-take and natural regeneration.

A long term plan is currently being developed to establish grain-processing mills so that women’s workload could be lessened. Users are also interested in cultivating NTFPs like Sugandhawal, Bojho and other medicinal and aromatic plants (MAPs), including Lemon grass. They expect technical and financial support for the promotion of such valuable NTFPs.

Besides the economic incentive, another important factor has been the positive support of the DFO in facilitating and supporting new ideas and more active forest management.

**d. Observations and Lessons**

One important lesson is the need for both initial financial and technical support. FUG members were able to secure loans but there was little support for this. The advance offered by the traders might help in the short term, but the FUG may have less control over who and when they can sell their products. Start-up finance may be managed in a simplified way through financial institutions or local savings and credit group may be mobilized.

The success of the Janaki FUG was also the result of a number of extension services offered by various organizations, in particular CBED, FECOFUN and NARMPASAP. The training courses, study tour, and frequent technical support strengthened the confidence of the FUG leaders to take the risk of investing in the NTFP trade. Thus support organizations are critical both in the initial phases as well as in the follow-up.

Equally important was the support provided by DFO in terms of approving the operational plan without any hesitation as well as providing moral support and authorizing FUG for the collection and sale of forest products.
The established market and marketing channel was another crucial factor in the group’s success. One lesson is that community based enterprise programs should initially focus their efforts in areas where basic marketing infrastructure already exists. This will enhance confidence in local institutions and enhance the visible affects.

2.4 FUG Consortium Enterprises

2.4.1 Chaubas Wood Processing Enterprise, Kavre

a. Background

Chaubas lies in the northern part of Kavre district in central middle hills. Chaubas comprises parts of Chaubas and Salle Bhumlu VDCs. A gravel road now links Chaubas with Dolalghat, and leaves the area only an hour’s drive by local bus to Kathmandu. The Nepal Australia Community Resource Management Project (NACRMP) has been active in the area for more than 30 years. In the late 70’s and 80’s, the project had undertaken massive plantations in various parts of Kavre and neighbouring district of Sindhupalchok (nearly 19,000 ha).

During the 1990s, the project found that plantations were becoming overstocked and required some level of harvesting. At the same time, a continuous patch of pine forest extending over 218 ha was handed over to four FUGs. The FUGs were seeking support from the project and the DFO to make more efficient use of the plantation resources. Moreover, it was becoming clear that as community forests matured they were over protected and under utilized.

In response to this, a detailed feasibility study was done by the project (Jackson et al, 1995). Three options were given: do...
nothing, concession to a large enterprise, or a community-based enterprise. The performance of a community-based saw-mill was considered superior against the other two options based on various economic and environmental parameters.

The study recommended the establishment of two timber processing enterprises—one in Chaubas and the other in Pipaldanda. The well-established plantations in the project area provided an ideal testing ground for investigating the feasibility of establishing community-based timber processing enterprises. It was also felt that this would be a good opportunity to better understand how proper management could provide more benefits to local people as well as enhance biodiversity.

Some constraints were also noted. Installing a saw-mill would require a sizeable initial expenditure, which FUGs could not meet themselves. The market for pine timber was weak, as furniture and woodworking shops prefer other species. HMG regulations regarding the transport of logs from the harvest sites to timber processing operations (especially those located outside of the NACRMP area) would need to be clarified and streamlined.

The study also noted that social constraints would be the biggest challenge. Most FUGs in the area were hesitant about harvesting mature trees for fear they would quickly disappear. This was partially due to the lack of necessary skills to operate and manage a sawmill enterprise and partially to the protection-oriented focus of community forestry activities to date.

In September 1994, the Project Coordinating Committee (PCC) endorsed the proposal for establishing the two pilot timber-processing enterprises. The Chaubas-Bhumlu Community SawMill has come a long way since its establishment in 1996.

Social and Economic Setting

The four FUGs which are part of the arrangement consist of various ethnic groups. Limited economic opportunities have meant that most of the households have members working in Kathmandu or other cities (Karki et al., 1997).

One particular concern regarding the establishment of the saw-mill was the involvement of women and the disadvantaged in the enterprise. As the enterprise became more complex, the need for formal business and management literacy would be essential. Most women and disadvantaged are illiterate and would
have little access to the enterprise management and decision making. In order to address this issue, the project also conducted literacy classes in the area, and despite this, the problem is persistent.

**Table 6. Baseline features of the four FUGs associated with the sawmill**

<table>
<thead>
<tr>
<th>FUG Name</th>
<th>HHs</th>
<th>Population</th>
<th>Forest area (ha.)</th>
<th>Age of trees (yrs.)</th>
<th>Average stand density/ha.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rachhama</td>
<td>61</td>
<td>384</td>
<td>39.50</td>
<td>11-15</td>
<td>996</td>
</tr>
<tr>
<td>Fagar Khola</td>
<td>71</td>
<td>439</td>
<td>53.25</td>
<td>15-17</td>
<td>1134</td>
</tr>
<tr>
<td>Dharapani</td>
<td>62</td>
<td>332</td>
<td>35.63</td>
<td>11-16</td>
<td>1097</td>
</tr>
<tr>
<td>Chapani</td>
<td>105</td>
<td>683</td>
<td>89.90</td>
<td>13-17</td>
<td>1233</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>299</td>
<td>1838</td>
<td>218.28</td>
<td>11-17</td>
<td>calculate ave. (weighted)</td>
</tr>
</tbody>
</table>

Source: Acharya (1999)

b. The Wood Processing Enterprise

**Ownership**

A license was not required for establishing the saw-mill according to industrial policy of 1998 for small businesses since the costs would be below NRs. 1,000,000 but it had to be registered, as it was greater than 1 horse power (hp) technology.

The saw-mill was established and registered with the District Cottage Industries Office in May 1996 by the four FUGs. It was decided to be registered as a private limited company with an objective of managing and utilizing the pine plantation for local benefits. A co-operative was explored but eliminated on legal grounds, as cooperatives require at least 25 shareholders (or FUGs). A 17-member enterprise management board was established independent of, but representing each FUG. It is required that four members from each FUG plus a chairperson be part of the board.

**Technology and Production**

The saw-mill is a simple diesel-powered 20 hp engine with an easily transported 36" band-saw. Earlier, the project provided 10 hp engine and 24 inches band-saw but this did not work properly, and the FUG enterprise invested in the current machine in 1997 from the money profits. The processing unit is fixed on land, purchased especially for the purpose, adjacent to the plantations. Timber harvesting and transportation from the forest to the mill is by headloads as well as local carts.

Wood conversion capacity of the mill is equivalent to an output of 2m³/day from an input of about 4m³ of logs. Technically, the production is possible throughout the year, but agricultural labor demands, holidays, and monsoon reduce the number of working days per year to about 170 days. This means that the annual raw material requirement for the mill is (170 days x 4m³/day) 680m³.
The sawing process yields only 50% of sawn wood, the rest being produced as waste. Enterprise leaders are exploring briquette making as one way to use the saw-dust produced (Dangal, 1999). Seasoning is done through air-dryers for the planks and sawn timber. This can be made quicker using solar kilns rather than using glass. By-products such as the lops and tops of the felling are used by the local people all around the locality.

Pinus patula is the sole wood being processed, and is used locally for a number of purposes. Options for further processing of wood into furniture etc. are limited by complicated technology, finance and market knowledge.

The only other product of economic value was resin produced by the pine. However, in comparison to resin, round wood could be sold for around NRs. 2,000 per cubic meters, 10 times than that for resin production.

Several types of training courses were provided by the project to FUG enterprise staff and the DFO staff including management, accounting, marketing, and harvesting training. Local DFO staff were trained to supervise and monitor the effects of harvesting operations in the forest. Conflict management training was also provided to alleviate any potential conflicts that could arise between and within FUGs.

**Financial Outlook**

Start-up costs were NRs. 83,000 and covered the expenses for equipment and construction materials. Labor inputs and local materials were provided by the FUGs. Project and DOF staff time were not accounted for and the project financed the purchase of necessary equipments and materials and then leased these to the FUG enterprise. Below is a breakdown of income & expenditure in 1998/99.

<table>
<thead>
<tr>
<th>Income</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source</strong></td>
<td><strong>Amount (NRs.)</strong></td>
</tr>
<tr>
<td>Sawn timber sold locally (242 cft.)</td>
<td>36,646</td>
</tr>
<tr>
<td>Sawn timber sold in Kathmandu (8015 cft.)</td>
<td>1,713,719</td>
</tr>
<tr>
<td>Off-cuts sold locally (80142 kg)</td>
<td>20,035</td>
</tr>
<tr>
<td>Private timber sawing (872 cft.)</td>
<td>17,440</td>
</tr>
<tr>
<td>Interest from FUG</td>
<td>4,914</td>
</tr>
<tr>
<td>Collection of dues from buyers in 1999</td>
<td>371,676</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,164,430</strong></td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td><strong>536876</strong></td>
</tr>
</tbody>
</table>

Source: Acharya, 1999
of the balance of NRs. 536,876, NRs. 509,849 is still to be collected from the buyers. The saw-mill owes a total of NRs. 568,867 to creditors and suppliers (NRs. 282,402 to FUG and NRs. 286,465 to NACRMP).

Although the annual transaction costs are in the millions, the net financial gain of the enterprise is minimal. Yet, the social capital, confidence and employment opportunities the mill has created, far outweigh the net profit.

**Marketing and Regulatory Issues**

Processed timber is sold both locally and in Kathmandu. The enterprise focused on local markets in the initial 4-5 years, with an ultimate target on Kathmandu. Three main buyers in Kathmandu and Patan purchase the wood. The timber produced at Chaubas has competitive advantage as it is near the big markets of Kathmandu, compared to the timber transported from farther away. The newly built road also help to ensure this advantage.

Just after the launching of Chaubas initiative, the local DFO issued an order which specified that local needs (FUG and district) had to be fulfilled before transporting forest products to outside markets. Recently (in 2001) another circular restricted the FUG to harvest trees for selling outside the community. This created problems and confusion to enterprise managers in their regular production and marketing activities.

**Social and Economic Benefits**

The saw-mill has contributed tremendously to the income and employment in Kavre. The enterprise itself employs 100 – 200 people. Lankuri FUG has generated additional employment worth NRs. 160,000 for its users.

The saw-mill has also spurred on local infrastructure and development activities (Acharya, 1999). One ward (Chapani FUG) was interested in extending the road while the leaders from the other FUGs were interested in school building. FUGs are also making some investments for operating literacy classes.

**Institutional Development**

The resources in all four FUGs have grown tremendously since its establishment in 1996. Women’s representation in executive bodies have increased and the FUGs have played a bigger role in initiating development activities and establishing linkages with VDC, DFO, NGOs and other Projects. Still, there are many areas that need improvement, particularly in organizational development, technical innovations, financial management, and marketing.

The Enterprise has not been able to act as a catalyst for networking among the four FUGs even though each contributes to its operation. Most users do not identify themselves with the saw-mill and it has not yet developed as a forum of mutual assistance in organizational matters. So far, the users consider the sawmill as a buyer of logs and a supplier of waste wood.
Enterprise Modalities and Case Studies

The biggest problems are in relation to decision-making and communication. This has created a communication gap between the enterprise and the users. For most users, there is little understanding of any of the operations or decisions made by the enterprise. In each FUG, the committee was reshuffled but the leadership is still confined to a single person or a few people. Women still limit themselves to observing, rarely forwarding their opinions. Even when asked, they do not actively respond. The women who are on the sawmill management committee also are not active in decision-making.

Because of the financial complexity of running a saw-mill, the account-keeping practices and organizational management need to be further improved.

Environmental Impact

An initial environmental examination was undertaken when the enterprise was established. The expected results were: a) increased output of forest products through the application of improved silvicultural techniques, b) improved regeneration, and c) decreased insect attack on trees. While no extensive evaluation has taken place, there seems to be little negative impact on the environment.

The processing plant requires minor engineering work and did not require removal of any trees or buildings. During operating hours, little soil or water pollution problems are encountered. However, during harvesting and transport, there may be some effect of soil erosion on paths and tracks.

NACFP and DOF agreed to monitor the enterprise’s performance using three specific mechanisms: a) DOF field staff negotiation with enterprise managers, users, and the committees, b) withdrawal of equipment in case of misappropriation, and c) withdrawal of rights to use forest by DFO in case over-harvesting occurs.

c. Observations and Lessons

The impact of the enterprise on forest ecosystem and benefits to the communities involved is positive. The profit status of the enterprise is also good. The resources in all four FUG have grown tremendously in recent years. Such commercial activities are generally viewed as a threat to the forest ecosystem, particularly by national level officials. This case demonstrates the opposite. Local level commercial opportunities have more accountability because the decisions are made closer to those who are impacted. Still there is a need for local capacity building in resource management, product development, and marketing aspects.
However, this level of achievement has been reached through tremendous and constant efforts of the bilateral project and the local DFO over several years. Changes in government regulations in relation to the use and trade of the forest products has hampered the trust between local communities and the government that had been built up over years of working together.

Within the user groups, there is also a need to understand how power influences decision-making. Thus, in such situations the local community groups should be institutionally sound and well established to ensure accountability and the institutional environment safe enough to ensure investments will not be hampered by the imposition of new laws or policies. On the other hand, as a result of the enterprise, income and employment have greatly increased. The FUGs have also started community development and infrastructure.

Such ‘showpieces’ often create demonstration effects. People in Pipaldanda and other nearby areas are interested to have similar initiatives like Chaubas. Chaubas FUG in general and the enterprise operators in particular have gained substantial experiences in establishing and running wood processing enterprises, and this could be useful to others in the process of establishing similar enterprises.

Technically, such projects have to be very acute to locally appropriate technical solutions. The project first bought a saw that the community could not use. Still there is much wastage but the enterprise is searching for solutions itself which is encouraging.

The company is legally a private limited company owned by a group of FUGs. In case the community forests are taken back and FUG dissolved, what will happen to the enterprise and its assets? As the existing legislation is not very clear, forest resource promotion programs should pay attention to the development of appropriate policy and regulatory frameworks which sustain the local initiatives in resource management and utilization.

From a market perspective, one still has to keep in mind the buyer. Locally, there is little market opportunities and even though Kathmandu is close by, pine is not one of the preferred woods.
2.5 Co-operative Enterprises

2.5.1 Allo Cloth Production Club, Shankhuwasabha

a. Background

The Makalu-Barun Conservation Project (MBCP) area consists of 10 VDCs of Sankhuwasabha and two VDCs of Solukhumbu district. The project’s goal is to improve local living standards and to preserve biodiversity of the area through the management of natural resources.

Allo is an endemic plant found between 1,200 and 3,000 meters, usually in areas unsuited to arable crops (Dunsmore, 1998). Many local cultures, especially Rai, Magars, and Gurungs, use allo for everyday products such as clothes, head stripes, and animal string (Shrestha, 1994). It is considered as one of the best fibers in Nepal. Although it is a traditional product, it has never been domesticated. Botanically, three species are available (Girardinia palmata, G. heterophyla and G. diversifolia). In Rai culture, Allo is a holy item.

The Allo Cloth Production Club (ACPC) was initially established in the late 70s and MBCP has continued supporting various aspects of the club. There is one distribution center in MBCP area at Sisuwar (Bhatt et al., 1995).

ACPC is registered as a local NGO with the Department of Cottage Industries. The producers are organized into local groups called sub-clubs. About 150 women in nine communities are affiliated with ACPC. A facilitator has been hired to solicit orders from customers, distribute them among the sub-clubs, receive the finished goods, and deliver products to buyers. In addition, the club organizes regular training courses for weavers and provides support to establishing new sub-clubs.

b. The Enterprise and Economic Opportunities

Products

Since the introduction of specialized trainings, the Allo “product-line” has expanded from its traditional base to the production of placemats, knitted shawls, and purses. It has successfully been woven with wool and cotton cloth to increase aesthetics and durability.

Lessons learned

- Very heterogeneous groups should not necessarily be included in one coop and coop members should not be too far apart.
- The benefits of staying together in the coop have to be clearly demonstrated to members; otherwise, as they become more empowered, they will tend to seek their own markets.
Technology

Allo plants are harvested from late November to January, before the plants flower and seed. Teeth or knives are commonly used to strip the fibrous material. The current peeling practices leave about 40% of the stem unused (Shrestha, 1994).

The villagers often form a group and walk to the Allo area, and stay there for a couple of days. Villagers can collect any time from their respective areas. Both men and women engage in harvesting. Profusely branched items are not harvested, as the bark peeling is difficult. Stinging hair is a nuisance to collectors, and gloves are used in harvesting. In Tamku VDC, bark collection averages 59.1 Kg per household.

Collected bark is soaked and boiled in an alkaline solution for approximately 3-4 hours and left to simmer overnight. After rinsing, the mass of fibers is beaten with a mallet to remove residual plant matter and separate the fibers. The bundles of fibers are coated with white mica clay or rice husk and left to dry in the sun. These fibers are opened further. Spinning is carried out in a lightweight wooden or bone spindle.

Spun fibers are woven on traditional backstop looms made locally of wood and bamboo as well as on treadle looms introduced by ACPC. Knitting was adopted as a result of training in 1980s. A variety of designs have been used ranging from loose cobweb designs to tighter knits. Synthetics are used to produce a range of colors (green, black, and red).

Markets and Marketing

International markets abroad and the tourist market in Kathmandu are particularly hungry for exotic fibers. In 1994, 3000 placemats were produced by ACPC and sold in Kathmandu. In addition, 200 meters of fabrics were sold to manufacturers and were used for file cores and handbags. In the same year, a few hundred knitted/woven shawls were produced and sold. The main buyers of ACPC products are Himalaya Leather, Association of Crafts Producers (ACP), and Mahaguthi. Each could use about 1000 m of nettle fabric per year (Inglis, 1995).

A close competitor of Allo is Hemp. Since it is illegal to cultivate Hemp, this gives nettle a distinct advantage, and in US markets nettle fibers fetch better prices than Hemp.

Weavers bring woven goods on order to Sisuwar. The club facilitator then delivers the goods in Kathmandu and pays the weavers after she has been paid. ACPC has a bank account in Khadbari. International payments go through The Mountain Institute (TMI) and MBCP.

The club facilitator has made strategic alliances with a number of customers in Kathmandu which bring both domestic and international orders. Customers abroad are reached through the Kathmandu customers, or through MBCP office, where purchase orders can be made.
Working with manufacturers in Kathmandu has helped ACPC reach markets abroad as they already have customers, and sales representatives who also attend international trade shows. Wholesale distributors and friends of ACPC members have brought nettle cloth products to markets in England, Japan, and the US. The US market continues to expand as a partnership has been formed with “From the Mountain”, which imports and wholesales handicrafts of Makalu Barun area and represents two US handicrafts producer groups. The clear advantage for the producers of working with a sales representative is that the latter manages relationships with buyers.

While markets exist at all levels (local tourism, Kathmandu, and international), more innovative and proactive product development strategies are required. An incentive-based price structure as an alternative to the current flat structure could improve quality. Even though there was an objective to strengthen the center so that it could have direct communication with buyers outside Nepal, this proved to be an impossible task.

On the one hand, the direct linkages meant that orders for product could be increased, since the buyer was ordering wholesale quantities. On the other hand, it proved difficult to fill these orders in time, since the nature of the wholesale business meant that retail customers expected delivery within a maximum of 2-3 months, while producers needed 6 months to prepare the order and get it shipped from Kathmandu.

The markets were also unpredictable, and so the demands from one year to the next could not be projected. There were also conflicts with the timing of the orders. Retail buyers ordered in August, expecting delivery in October for sale in the winter season. But these months are the busiest agricultural months in the villages. Therefore, production would only take place during the slower winter months, with orders only arriving in spring of the following year, by which time buyers were stocking up on summer inventory.

Technical Support

Several organizational issues were reported. The facilitator was found to be running the organization as a sole proprietor without any functional relationship with the executive and advisory committees. Financial records are neither clear nor in order.

It was also found that there was ineffective communication between ACPC and customers, and between the facilitator and sub clubs. In 1994, options for improving Allo products and marketing were explored and procedural guidelines and recommendations for technical assistance developed.

Recommendations for technical assistance included: training in business management, traditional methods for production (e.g. natural dying), and training on cultivation and harvesting techniques.
A workshop was organized by the project to improve record keeping and the overall organizational effectiveness of ACPC (Bhatt, et al 1995). It was clarified in the workshop that sub-clubs ACPC and MBCP now work together, with a clear sense of responsibility and respect for what each does or can do.

**Economic Opportunities**

Allo handicraft production is still an important income generation for the people of Makalu Barun. Club members earn a supplemental income from production from NRs 2000 to NRs 4000 annually (US $50). This comes around 25-50% of the average annual income of farming families in the project area, which is estimated to be NRs 8000.

c. **Observations and Lessons**

The enterprise has had a positive impact on the livelihoods of the weavers and their families (Inglis, 1995). It has also influenced gender roles in the households. As a result of the establishment of this enterprise, weavers have an entirely new appreciation of the market demand. As income from Allo products increased, the number of weavers grew as well. New interest was generated among young women, which ensured that the skill will not be lost.

In some households, men started to weave and women started to become actively involved in marketing.

Environmental impacts were also addressed, as the producers opted not to use bleach even though there was market demand for a bleached product. Other issues emerged once it became clear to forest users from different villages and different FUGs that Allo was a resource with a market value. Conflicts started to arise between newly formed FUGs in which some of the forests no longer had access to Allo although in the past they had collected it from nearby forests which belonged to other villages.

Some of the major challenges facing the cooperative were dealt with through discussions. For instance, once market demand increased there was concern about the regeneration capacity and use of fuelwood. However, this was solved through agreement on the operational plan within the community forest users group.

Challenges still remain in production, quality control, communications with customers, timely delivery of finished products, transportation bottlenecks, and cooperative management. ACPC has been supported on and off by development programs since it was initiated in the late 1970s. Such long-term support has had a positive impact in the sense that support is usually not given for long enough time as to allow the entrepreneurs to develop their own confidence and market linkages.
On the other hand, in the case of ACPC, even after many years of support, it is still not self-reliant. This seems to be because of an inherent flaw in the initial design of the cooperative. Throughout its history, it was often questioned whether it was viable to try and maintain a cooperative of villages so far away from each other, especially when there was no communication possible between them except through messengers.

Even within one or two VDC it has proven to be an impossible task for the management staff in the center to distribute orders and manage payments. In some instances villagers have closer linkages to tourism markets in Solukhumbu and the possibility for different marketing strategies. They are also different ethnic groups.

The supporting organizations were not sure as to whether it would be best to create artificial marketing conditions in order to encourage the coop to stay together and be strengthened, or whether it would be best to let market forces act on their own and allow villages to seek their own. Therefore a lesson learned is that very heterogeneous groups should not necessarily be included in one coop and coop members should not be too far apart. In addition, the benefits of staying together in the coop have to be clearly demonstrated to the members.

2.5.2 Praja NTFP Co-operative, Chitwan

a. Background

The Praja NTFP Cooperative was initiated in 1998, as a result of almost two years of groundwork done by the Praja Community Development Program (PCDP), one of SNV’s programs in the hills of Chitwan district of Southern Nepal. There are approximately 300 households who are members from nine villages across four VDCs.

Praja collectors are very poor, marginalised and remote communities whose main advantage is their traditional use and knowledge of the forest. Most families only have enough food to last six months of the year. In many cases, the total annual cash income for a family is less than NRs 5,000.

The collectors had to organize themselves in order to aggregate larger quantities of products and to create linkages with buyers outside of the area. Without these linkages, the collectors were dependent on road head traders. The program worked through SEACOW, an NGO which used several strategies to reduce the risk which collectors would face with a new enterprise, while at the same time trying to avoid dependency of Praja on the facilitating NGO (Lecup et al 2000).

Lessons learned
- Institutional and technical support can help poor communities earn better returns from NTFPs.
- For international markets, quality plans will help certify the product.
- Mechanisms for ensuring collectors get paid in time are essential to avoid exploitation.
b. Resource Management

Resource management is carried out through common property regimes and community forestry. So one challenge was that the enterprise had to be closely linked to FUG, without the Praja becoming further marginalised in the process.

Since the FUGs are composed of a mixed population of Praja and non Praja as well as wealthier and very poor Praja, there was a risk that the more educated and wealthier members of the community would get all the benefits from the enterprise. The process is further complicated in that the forest area actually belongs to at least 2 different FUGs. The cooperative thus has to obtain leases from both in order to extract product.

c. The Co-operative as an Enterprise

The Praja Co-operative Ltd. was initiated as an outcome of Market Analysis and Development (MA&D) workshops with the forest collectors. In this process, identification of potential products is followed by selection of the most viable NTFP by participants for which they wanted to improve the marketing systems.

The social, technical, market, environmental and institutional opportunities and constraints were assessed. The experience of the collectors had been that if they depended on individuals in their communities to do business, they would be exploited. Therefore, the collectors agreed that a cooperative organizational structure was the best way to overcome the distrust and improve accountability.

The cooperative tried to achieve economies of scale by linking up scattered villages. This was also a big challenge. In the initial design, only villages which were within 4 hours walk from each other were included. However, unless there is a clear advantage, the cooperative may eventually break up into smaller associations or groups, which can then choose to federate.

Certain provisions were created for women including a rule that half of the income generated from the products by a household will be handed to women and equal opportunities will be provided for women to have direct involvement in all aspects of coop affairs.

Marketing and Operational Plan

In its first season, the cooperative aimed to collect 7,560 kg of four different products: 3 of them are used as ingredients in ayurvedic medicines, and one is used for making herbal tea. The basic strategy of the cooperative has been for collectors to dry products in their village and ensure that it meets the quality requirements of the buyers.

The producers then deliver their products to the collection centre where they are immediately paid upon delivery based on prices fixed by the Cooperative Executive Committee. There are three product collection centres with rented storage yards. The Executive Committee representatives from the village groups
in each corresponding VDC play a major role to make all the necessary arrangements in the collection centre.

The coop wishes not to depend upon one buyer. Targeted market outlets are several manufacturers of herbal tea and ayurvedic preparations (medicines) in Nepal. Appropriate buyer(s) will be identified based on the results of analysis of the marketing information. Indian or overseas buyers will eventually be targeted depending on prices in the market and product demand.

**Financing**

Initial financing particularly for working capital was essential in order to implement the strategies developed in the enterprise plan. This was particularly true to be able to pay collectors immediately and aggregate larger volumes and sell it at the best price. Since the Praja own very little land, they have no collateral which would be accepted by a lending institution. There was no source of investment capital available either, so the program decided to provide a combination of an interest free loans and a grant. The intention was that the enterprise would build up its assets so that it could pay the loan back within the prescribed time and still have enough working capital to be able to meet its needs for the next collection season.

In its first season, the cooperative started with an investment of NRs 161,017. Financing was provided in part by member share capital (220 members who purchase shares of NRs 50 each), partly by a grant from the project (NRs 75,000) and partly by a soft loan, also from the project (NRs 75,000). The loan was to be paid back by the end of the 2nd season of collection. The loan and grant were administered with the assistance of SEACOW.

Expected sales in the first season were NRs 201,281. The net profit was NRs 37,413. Collectors earned a total of NRs 110,670 or an average of NRs 500 per household. This was expected to grow to NRs 1200 per household within the first three years.

**Risks and Risks Management**

Risks were identified including: over harvesting, irregular or infrequent fruit production cycles, envasiom of coop principles by the members, poor leadership, poor marketing knowledge and skills, dependency on only one buyer, decrease in product demand, decrease in selling price, change in government policies, inflation, and uneven distribution of coop benefits.

To minimize these risks, training was planned for the village based groups, for the executive committee and the account committee members. Discussions were held regularly in the group to monitor these issues and continually refine existing strategies or develop new strategies based on experiences. In order to provide a buffer for price fluctuations, the assets of the cooperative would be increased as savings. This will eventually enable product to be stored for longer periods if necessary, while still paying collectors as soon as they deliver product.
d. Observations and Lessons

The cooperative is now beyond its initial pilot phase and needs to expand the volume of sales in order to build up its asset base. However, before this can take place, resource assessments should take place for the main products. Once the resource base is well understood and working capital assets increases, cooperative membership can also be increased in order to benefit more Praja.

The main products currently collected are all harvested in the same season. The cooperative is therefore only active during half the year. Additional products need to be identified which can be collected during other times of the year. The cooperative is also looking into possibilities of marketing agricultural products produced by its members. Once assets are built up, the co-operative needs to establish formal links with financial institutions and build up good relations in order to have access to short term loans for working capital.

As the cooperative finds more buyers, quality control will become an increasingly important issue. This is particularly essential for the overseas market. Quality plans, which certify the product, include resource management plans and ensured hygienic drying and packing procedures will need to be developed.

The time delay between collection and payment can be anywhere between 2 weeks and 2 months. The poorest members cannot afford to wait that long and are still ending up working as laborers for others. The cooperative will need to set up disciplined and well managed savings and credit groups amongst each village group and make advances to members during the lean periods which will be repaid through income earned from NTFP collection. This is a high-risk option for the use of the limited cooperative assets and groups, therefore need to provide good guarantees for the borrowers.

Praja coop illustrates a case where poor collectors can be organized for aggregation of larger quantities so that roadhead traders can be bypassed to have access to more attractive markets beyond them. If institutional and technical supports are provided to poor communities, they can earn better returns from NTFPs.

Finance is a crucial component of enterprise development, so if the owners are too poor to finance on their own or lack assets to produce as collateral, approaches to provide grants as well as loans are essential for collectors trying to develop organized enterprise activities.
2.6 Private Limited Companies

2.6.1 Humla Oil Private Limited, Humla

a. Background

The Humla Oil Pvt. Limited (HOPL) is located in the high Himalayas of Northwestern Nepal, bordering with Tibet on the north and India on the west. The company was created with support from ANSAB under the BCN funded project. To organize the collector communities, a local NGO called Humla Conservation and Development Association (HCDA) was established. When the forest users/collectors met together to discuss on the use of their resources along with ANSAB and HCDA staff in 1994, they came to know the potential of herb processing enterprise. Accordingly, HCDA was provided with revolving equity funds to promote the NTFP based enterprise in the district. The fund was made available to such enterprises as seed money to initiate enterprise and as working capital to run it properly.

HOPL was formally registered as a private limited company to ensure flexibility and independence. With financial and technical supports from the project, the local communities established HOPL in 1994 as herb processing enterprise, with one distillation unit near the herb collection site. This enterprise was initiated to capture additional value from the traditionally available natural resources to the communities.

Lessons learned

- Prices for community collectors can be increased by having the support agencies introduce competition.
- In order to cut out middlemen and develop new products for export markets, strong management capacity and favorable regulations are needed.
- Volume of stock is important in order to command a better price in existing markets.

Representatives of herb collector communities were involved in the entire process of enterprise development, from feasibility study through to business plan preparation. Three active members of HCDA were selected by the communities to represent them in the company. With the establishment of the
company, the communities who were earlier only the suppliers of raw materials turned out to be the managers and owners of the processing company. They began to sell aromatic herbs, mainly Jatamansi, Sugandhwal, Juniper Berry, and Sunpati to the company at the prevailing market price.

The collectors of 8 VDC of Humla supply the raw materials to the company. More than three thousand (3096) collectors from 1966 households are engaged every year in the collection and supply of aromatic herbs. The people living here are very poor and illiterate. The infrastructure development in this region is the poorest in the whole country.

The communities comprise of different castes of people, including Chhetri, Brahman, Lama, Kami, Sarki, etc. The main occupations of the people are agriculture, animal husbandry, seasonal works, portering, and herb collection and sale.

Even though the agricultural land here is so inadequate that it can only feed the people here for 5 or 6 months, they still have to spend most of their time in agricultural activities. Many poor people are forced into seasonal migration to India to earn money. Since there is no employment alternative to generate cash incomes, the collection and sale of NTFPs in the district, particularly in this region, has been crucial for cash income and livelihood.

In the past, the trade of salt and food grain transported by sheep, goat, mule, and yak to Tibet and southern regions, used to support the living of the poor people. At that time, the need for cash was less realized. Reduction in the number of such power animals, coupled with an increase in the population, led to a reduction in this type of trade. This in turn resulted in a decrease in the district's food supply and which in turn increased the need for cash to purchase food grain.

b. The Company and the Economic Opportunities

ANSAB, ATI (currently known as Enterprise Works Worldwide), and HCDA undertook the enterprise feasibility study, helped to prepare a business plan for the enterprise and provided the required technical as well as financial supports to the enterprise in the beginning. ANSAB along with the HCDA helped to source sustainable raw materials to the company by facilitating the forest user group formation and resource management plan preparation. ANSAB also provided support in biological monitoring to ensure the sustainability of the raw
material supply. It also managed to provide training to the company staff. ANSAB has been continuously providing market information and assisting in the marketing of the company products in national as well as international market.

Ownership and Management

The company shares are held in the name of HCDA, which will later transfer the requested shares to the forest user groups in the region (HOPL 1994). Experienced leaders of the collectors are members of the executive committee of the company. The executive committee formulates the policies and makes the decisions with suggestions and guidance from the collector communities that are organized into FUGs. The director of the company monitors and supervises the enterprise activities and provides directions to the company manager. The manager is responsible for the operational activities of the company (HOPL, 1994).

The plan aimed to transfer the shares directly to the communities when they formed a formal group, which is legally and financially able to hold the shares of the company. FUGs were formed but they could not purchase the shares of the company due to several reasons. Firstly, since the local people are very poor, they could not afford to invest in it. Neither could they collect enough funds in their community account to purchase the company shares. Secondly, the company, although it was successful in achieving its main objectives to provide an economic incentive for sustainable resource conservation and to maintain continuous income for the communities through sustainable resource harvesting practices, it could not make enough profit to attract them to invest. Thirdly, the management team of the company could not successfully motivate the communities to transfer the shares. Fourthly, the management team did not feel any urgency to transfer the shares, since they might feel that HCDA itself represented the whole collecting communities of the region.

Initially, there were 10 employees in the company (HOPL, 1995). These included a manager, an assistant manager, two technicians, and six helpers. Recently, the company has cut down the number of fulltime employees and hires additional helpers during the peak season to reduce the operating cost.

There are some challenges in enterprise management. These include proving the capacity of management team, monitoring, supervision and motivation system. Employees and the management are not overly concerned about the profitability of the enterprise. The employees and the management are also not very aware of the responsibility and accountability of their job. The enterprise also needs to think over the share transfer issues.

Technology and Production

The company comprises of two essential oil distillation units located close to the herb collection areas, and centralized quality control and packaging units in Simikot, where the headquarters of this company is situated. One distillation unit is situated near the
Community Based Forest Enterprises in Nepal

district headquarters in Kharpunath VDC, and the other in Rodikot VDC. Both distillation units are in the center of the catchment area of herb collection site.

The company is using simple steam distillation technology to process the alpine aromatic plants. The distillation units are fueled by dried firewood. The chamber of the distillation unit is made out of iron with stainless steel inside the condenser. The capacity of the two distillation units is 150 kg and 300 kg of raw material per batch. The unit in Rodikot is bigger and more efficient than the one in Kharpunath.

HOPL has been producing high quality essential oils. The company annually produces 300 kg of Jatamansi (Spikenard) oil (HOPL, 1995). It produced 250 kg of Jatamansi oil in the first year and increased the production volume each year. Next, in the third year it made trial production and test market of Sugandhwal, Sunpati, and Juniper Berry oil and added these oils to its product line. It also managed the supply of Timur (Zanthoxylum spp) and anthopogan oil along with many other oils to its buyers and made trial production of a couple of other aromatic plants like Pirhe grass, but could not find a satisfactory market and economy of production.

Though the company increased the production capacity with the establishment of a bigger distillation unit in Rodikot, the actual production of essential oil could not be increased due to heavy snow fall hampering herb collecting activities, decrease of the demand of Jatamansi oil in the market, and shortage of working capital.

The distillation units were brought from India. ANSAB provided the technical know-how in the beginning for distillation of aromatic plants. Later, staff of DPR also assisted in improving the production process of the essential oils. HOPL learned from experience that longer distillation hours enhance the quality of essential oils, and accordingly decided to increase the oil distillation period. It improved the production system by introducing weighing, grading, and monitoring measures during the oil production cycle. Though it increased the production cost, it continued to produce high quality product. To save the energy, it developed a hot water recycling system for the boiler. It built a safe storehouse for the raw materials and marc. It also maintained the consistency in oil quality by improving the oil filtration, grading, and proper storing facilities. There is still much scope for improvement in fuel efficiency, raw material procurement, oil distillation process, etc.

The enterprise consumes huge quantities of fuel wood. A fuel efficient production system is needed. The efficient and sustainable supply of fuel wood is also a challenge for the enterprise.
The efficiency of the equipment in Kharpunath is considered to be quite low. Production and labor efficiency in both units need to be increased. HOPL, being located close to the resource base, could not get the comparative advantage of oil processing in the district because the residue (mark) of Jatamansi has to be transported to the plains for sale.

Because of the inconsistency in supply and quality of the raw materials and climatic conditions, the enterprise cannot maintain consistency in oil production. There is also a risk of low quality raw material and adulteration. Although there is still high competition with other traders for raw materials, the company is in a better position to source the raw material for its production due to its close proximity to the resource base and its raw material suppliers.

**Financial Outlook**

Total authorized capital of this enterprise was initially NRs 800,000. Since the people in Humla were very poor and were not in a position to pay the enterprise capital entirely, the enterprise acquired a grant from the BCN project of ANSAB and obtained the remaining capital from the HCDA equity investment fund. Later, authorized capital was increased up to NRs 10,000,000 to suit the scale of operation needed for increasing the profit to the enterprise.

As of July 1998, HOPL had assets worth more than NRs 5,000,000, with cash of NRs 900,000 including receivable, and stock worth NRs 3,200,000. It had Jatamansi oil stock worth more than NRs 2,500,000 in 1998. The fixed assets of HOPL as of July 1998 are presented below:

**Table 8. Fixed Assets of HOPL (as of July 1998)**

<table>
<thead>
<tr>
<th>Equipment and land</th>
<th>NRs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant and machinery</td>
<td>873,700</td>
</tr>
<tr>
<td>Land and building</td>
<td>364,500</td>
</tr>
<tr>
<td>Office equipment</td>
<td>9,000</td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>(354,300)</td>
</tr>
</tbody>
</table>

HOPL could not make profit until the third year of operation. It had to invest heavily in enterprise production improvement and market development. In the year 1997, a heavy loss was incurred because of poor raw material supply to the enterprise and the decline in the market price of Jatamansi. Table 9 below presents the profit and loss account of HOPL in the various years.

**Table 9. Income Statement of HOPL**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1,077,000</td>
<td>2,623,000</td>
<td>4,466,000</td>
<td>5,376,000</td>
</tr>
<tr>
<td>Expenditures</td>
<td>1,077,000</td>
<td>2,755,000</td>
<td>5,011,000</td>
<td>5,315,000</td>
</tr>
</tbody>
</table>
HOPL has been investing a large amount of money in the stock of raw material and finished goods. Because of the seasonal supply of raw material and the uncertainty of market demand, inventory costs make up a large portion of total expenses. The Jatamansi oil stock was excessively high in the year 1998. From the year 1999, the sale of Jatamansi has improved quite satisfactorily releasing tied-up working capital with this oil.

The production cost has been increased due to the increment in the raw material costs (aromatic plants and fuel wood), labor cost, transportation cost, etc. Besides these, the enterprise’s production cost has been increased because of its social cost. The enterprise is regularly paying high royalties for the raw materials. This leads to high production cost in comparison with the others who frequently escape such cost.

The enterprise has some problem in financial analysis of enterprise operation. The enterprise has to pay back the equity fund of HCDA. It does not have enough working capital to operate in full capacity. It needs to improve the profitability of the enterprise. Since the enterprise has multiple stakeholders, sharing of profit and loss among its stakeholders has not yet been clear.

**Market and Marketing**

Though the essential oils produced by this company can be used for many different purposes (perfumery, flavoring, medicinal, etc.), they are mainly used in perfumery and flavoring purposes in different industries. The company has been selling its products to domestic, Indian, European, and North American essential oil dealers. However, the Indian market has been the biggest one for most of the oils. This is because if one sells the oils on the domestic market, it most probably goes to India. Some also suggest that a major part of the oils sold in India are re-exported to other countries.

Since the Indian government has banned plants like Jatamansi for export in any form, the market of the Jatamansi oil has dramatically decreased since last year. Since then, marketing of Jatamansi oil has been a major problem for the enterprise. Although Jatamansi oil sales have increased over the last six months, the enterprise has now temporarily reduced the production of Jatamansi oil and has introduced a strategy to revise the product mix. It is also exploring the option to diversify the product mix.
Community Based Forest Enterprises in Nepal

base. Despite several constraints, HOPL has sold out all the stock of Sugandhwal oil and has been selling nearly 200-400 kg Jatamansi oil every year. It has been regularly supplying Timur oil and Wintergreen oil to its buyers mainly in Europe.

In 1997, the enterprise procured very poor quality raw materials. Although it was difficult for the enterprise to compete with other traders, it could have maintained better quality raw material by differentiating between poor and good quality raw materials. In that year, the procured raw material reduced by more than 50%.

In the same year, the enterprise changed in its strategy for selling its products. It did not sell the Jatamansi oil at a competitive price. When the demand for the essential oil fell, it should have diversified the product until the clearance of the oil stock. Instead it continued the production of the same oil. The company could have been kept running by dealing in crude herbs or by diversifying its product. The company could not properly analyze the dynamics of market and unfortunately tied the working capital with the oil stock.

HOPL used to sell its entire products in the domestic market. Later, it expanded its markets not only to India but also to Europe and North America. It introduced price differentiation strategies for the different target markets, volumes of procurement, and terms and conditions of the sale. To promote the essential oils in Europe and North America, it participated in several promotional fares and exhibitions. It arranged several meetings with individual essential oil dealers, provided samples to many companies around the world with business offers, produced advertisements for many leading newspapers and periodicals, and appeared in business directories, journals, newsletters, reports, and newspapers.

Situated in remote locations, the enterprise has many problems in marketing management. These include regular communication with buyers, the cost of marketing activities (transportation, communication, travel, etc.), marketing skill, market research and information, marketing supports (GO, NGO, and others), competition and relation with other companies and dealers, etc. Besides these, demand for essential oils is unreliable. The enterprise has a problem in smoothly selling its products (clearing up stock of Jatamansi oil).

There was competition among oil producers in Nepal to sell Jatamansi at very low price last year. The competition resulted in decreasing the price of Jatamansi oil in the market. Some producers have lowered their production since then. This type of unhealthy competition has badly affected the profitability of the enterprise.

Big NTFP traders and dealers want to kill off the new entrepreneurs. In 1997, NTFPs traders dramatically raised the raw material cost in short term. Essential oil was sold below cost in Indian markets. Big crude herb dealers tried to spoil the market for essential oils, particularly Jatamansi oil in India, in order to squeeze small producers out of the market place.

A ban on the export of crude herbs from Nepal has increased the handling costs...
Community Based Forest Enterprised in Nepal

of illegal herb dealers and consequently reduced the income of the herb collectors. Although this has benefited the oil producers who now can buy the raw material at lower price, the fair oil producers are severely affected by harassment in oil export. The fair oil producers are not in a position to compete with the illegal crude herb dealers.

HOPL has felt harassed by different organizations in the marketing of essential oils. Regulations on trade of NTFPs are too restrictive. Useful market information is difficult to get. There is little opportunity to get technical assistance and facilitation from the government agencies. There are regulatory and marketing barriers that discriminate against small business like HOPL.

Economic Opportunities

The communities of the region have hardly any income generating opportunities. When the HOPL started its operation, it created many economic opportunities for the local people. Along with the establishment of HOPL, many traders came into the region to expand the NTFP trade.

HOPL has been providing handsome amounts to the collectors for the NTFPs and fire wood. When HOPL raised the Jatamansi price, other traders were compelled to increase the price not only of Jatamansi but also of most other NTFPs. In 1998, more than NRs 137,500,000 was generated from NTFP collection and sale by the collectors in the region, which accounts for 25% of the total income of households with a mean income of NRs 6,998 (ANSAB, 1999).

HOPL has been providing a conservation fee to the FUG on the collection of the raw materials (herbs and fire wood) that are used in this enterprise. It has been providing employment to more than 10 local people in distillation activities and creating many more employment opportunities in its seasonal activities.

HOPL has provided not only economic benefits but also other benefits to the society. These include conservation education, literacy classes, FUG formation, forest and pasture management planning, forest and pasture hand over to communities, skill and capacity development in resource management through training, workshops, educational exchange visits, entrepreneurial development, inventories of biological and social resources, biological and social monitoring, research of commercially harvested medicinal and aromatic plants.

In 1998, the outbreak of famine in Humla claimed several lives amongst the poor. The Rahadev community arranged a FUG assembly to resolve the problem. They opened NTFP collection for one week in April 1998, even though their forest operation plan prohibited NTFP collection in this season. This market was available to NTFP collectors partly as a result of the establishment of HOPL in the region.

c. Impact on Natural Resource Management

When HOPL was established, and the project started activities to raise
conservation awareness, the communities realized that the forest and pasture could not supply the raw materials if the proper resource management system was not applied, and consequently their source of income from the collection would soon vanish. After realizing the importance of resource conservation, the communities started institutionalized resource management systems within the framework of community forestry in Nepal.

The communities in the region have formed 19 forest user groups and have brought 13,000 hectares of forest and pasture under the community management system (ANSAB, 1999). In order to reinforce resource conservation efforts made by local communities, the company increased the raw material price for collectors from NRs 17 to NRs 27 in its first procurement period of Jatamansi. The company also paid the conservation premium fee of NRs 15 for each Kg of plants purchased (which earlier used to go to DFO as a royalty) to the concerned forest user group to ensure a sustainable supply of the raw materials. These communities have started a scientific harvesting system to ensure the sustainable supply of raw materials to the enterprise.

Since resource conservation is one of the main objectives of this community-based enterprise, it is focusing more on providing economic incentives to the natural resource collectors, thus linking the resource management with income generating activities. The economic benefits provided by this enterprise have resulted in improved resource conservation practices, which is one of the major achievements of this enterprise.

Before 1994, grasses including Jatamansi in the alpine pastures of Rodikot, used to be burned to allow summer grasses for livestock. As a result of the enterprise, these herbs later turned out to be important cash generating products for local people.

HOPL has made significant achievements on several fronts. It has provided good herb markets and market information to the local collectors of Humla, developed international markets for Nepalese essential oils, promoted environmentally friendly and socially equitable concepts in the marketing of natural products, provided economic opportunities to poor people in the remotest area of the nation.

d. Observations and Lessons

HOPL was established with supports from Kathmandu based NGO (ANSAB), local NGO (HCDA), and the INGO (EWW). This involved tremendous effort and services in technical, financial, and institutional development aspects. Government departments like DPR also provided services required by the enterprise. Establishment and operation of HOPL in Humla indicates that even in remote locations, economic opportunities may be created by making proper use of natural resources like NTFPs, many of which have high values and low volumes.

The HOPL case illustrates the difficulties that have to be faced while trying to establish an enterprise that is actually owned by the collectors and the poor people...
in the community. The communities/FUGs that were expected to purchase shares from the enterprise within a few years of establishment of the enterprise could not do so due to lack of resources. This raises a serious question regarding whether or not the control over, and benefits from the commercial use of resources through such enterprises, can accrue to the poor and the marginalized members of the community.

The potential of NTFPs in remote locations has to be harnessed to address the chronic poverty, periodic famine, and social breakdown through seasonal migration and unemployment. Programs that have the twin goals of conservation and local economic development can be replicated based on the learning that HOPL helped local people to recognize the value of so-called weeds through appropriate commercialization. Even at times of great famines, NTFPs were used just like drawing cash from the bank to buy food. This reflects the value attached to such resource by local people and the market forces.

The enterprise sites were selected at collection catchments. This helped ensure the quality and quantity of the raw materials. The company had to face severe competition with the traders, and in order to attract raw materials and provide fair prices to the collectors it adopted various measures.

Marketing of Jatamansi oil was a difficult task for the company. While the production continued without any reductions, the market for the Jatamansi oil suddenly fell, partly as the result of imposition of a ban by India on the export of any form of Jatamansi. Another reason why HOPL could not sell it was that it could not make appropriate pricing and selling decisions even when the buyers were offering fair prices. Overall, HOPL has not been able to tap available marketing opportunities through appropriate marketing strategies.

HOPL expanded the production capacity, in terms of number of products and quantities produced gradually as experience was gained but it still has some technological issues to improve upon. It trialed new aromatic plants, and some of them were successfully launched into the market.

HOPL still lacks adequate entrepreneurial skills and managerial quality. The board of directors and staff are guided by the NGO mentality. Those leading the enterprises have several engagements and interests, which the HOPL alone cannot fulfill. Their capacity to make appropriate financial, managerial and marketing decisions needs improvement.

Several issues relating to NTFP regulations have affected the enterprise operation and its effectiveness. Most of the regulations are control oriented and tend to restrict the sustainable use and trade of the NTFPs. This hampers the capability of local enterprises to produce and market the products effectively. Promoting community based enterprises that add value to local natural resources is a very intense process. A broad range of actors that include local as well as national NGOs, donors and government departments should facilitate this. This necessitates
a program that links multiple stakeholders for shared action and responsibility.

The question of equity has to be addressed carefully. The elites in the community have a greater chance of capturing the benefits despite the intention of projects. The enterprise modality that requires the disadvantaged and poor users to pay for the shares from their own sources may not favor them in all circumstances. For low-income members and communities, there may have to be a provision of grants or subsidized prices for the shares through specifically designed programs.

Small scale community based enterprises may not be as efficient as established traders in management and marketing and may succumb to cutthroat competition. Community based enterprises should be given added incentives through regulatory and fiscal measures compared to the free traders, and provided with appropriate marketing information and capacity building trainings by relevant projects and organizations.

The case of Jatamansi has generated several lessons. First, sensitize the enterprise planners to take review of the international regulatory environment before and after the establishment of the enterprises. Second, the marketing strategy has to be very efficient. In order to develop the capabilities to address this challenge in the community based enterprises, there has to be committed intermediaries that provide quick and effective services to the community based enterprises. In the long run, several small enterprises may combine to hire competent marketing consultants at national or regional levels or establish strategic alliance with exporters.

The overall lesson from HOPL is that the evolution and effective running of community based enterprises depend on appropriate services through training, financing, marketing information, financial analysis and working capital management, technological innovations, natural resource management and policy advocacy.
2.6.2 Malika Handmade Paper Private Limited, Bajhang

a. Background

Situated in high mountains of the Far Western Development Region of Nepal, the district of Bajhang is surrounded by Humla and Tibet in the North, by Humla and Bajura in the East, by Darchula and Baitadi in the West, and by Doti and Baitadi in the South. This mountain region is very remote and poor in terms of infrastructural development and the economic conditions of the people living in the area. However, it is very rich in natural resources. Non-timber forest products (NTFPs) are important resources to the district, which can play a crucial role in the economic development of the region. Bajhang has many non-timber forest products but very few enterprises utilize them at the local level to generate income for the poorest people of the district.

After a preliminary study using the biological, social, economic, and technological criteria, a feasibility study was completed with the participation of local community members in Bajhang to select the most prominent enterprise for the region. A paper-making enterprise ranked top among the products and enterprises evaluated. This enterprise was identified to be a vehicle for generating economic incentives to the community of Kailash and to conserve the resource base and the bio-diversity of the region.

The existing paper making enterprises in Bajhang and elsewhere in Nepal are operating in a production-oriented capacity and are not paying much attention to sustainable natural resource management and social equity issues. Demand for this product in domestic and international markets are

Lessons learned

- Integrated participatory planning with users of a resource is needed in order to ensure raw material supply matches market demand.
- An existing product and existing markets can be successful as long as there is adequate research and planning.
- Clear regulations and coordination between Ministry of Forests and Ministry of Industry are important in order for community based enterprises to be formally registered and thereby receive services.
high in comparison to the current supply situation. This enterprise was created with a view to satisfying customer demands for paper products thereby creating incomes at the community level. It is expected to help upgrade the economic condition of the local collectors providing opportunities to collect and sell the raw materials. With the establishment of this enterprise, those people who were only the collectors of NTFPs and suppliers of the raw materials become the owners of a simple technology-based enterprise and manage to utilize and conserve their natural resources on a sustainable basis.

b. The Enterprise

The Malika Handmade Paper Pvt. Ltd. is a community owned handmade paper making enterprise, which has been established at Kailash-2, Hamarsain, Bajhang. The main goal of the enterprise is to provide economic incentives to the community members to conserve the natural resource base of this region while generating profits to shareholders for development of this enterprise in the long run.

Ownership of the Enterprise

Binayak Pimidanda FUG and ANSAB Equity Fund Investment Committee own the enterprise. The board of directors comprises representatives from the FUG Bajhang and the ANSAB Equity Fund Investment Committee. The board has recruited a manager who is responsible for all of the operating activities of the enterprise and the chairperson of the board supervises him. The enterprise development and resource management activities have been monitored and supervised by the enterprise development committee and resource management committee. There are four technicians, one helper, and eleven laborers. The enterprise maintains smooth relations, co-operation, and coordination with other stakeholders such as community forest user groups, collectors, suppliers, traders, other firms, funding institutions, and assisting and regulating institutions, to accomplish its goals.

Marketing

For centuries, hand made paper was the only paper used for writing. Its production dates back to the sixteenth century. Even in this modern era, legal documents in Nepal are still prepared in it and the Nepalese court hardly accepts any legal documents prepared in other types of paper.
There is a huge market for this product in western countries with an increasing trend. As per the Table of Nepal Overseas Trade Statistics, total paper worth NRs 76, 501,864 were exported in 1997/98 (MHPL, 2000). Main importers of handmade paper from Nepal are France, Germany, United Kingdom, United States, Japan, Korea, Australia, Belgium, Denmark, and Switzerland. Traditional decorative printing adds value to plain paper before it is exported (MHPL, 2000). Its demand is increasing day by day.

The enterprise offers its quality products to buyers in Kathmandu at negotiated prices. The enterprise is seeking to make an association of paper producers in Bajhang to increase its bargaining capability. It has a plan to differentiate its products as superior ones in the market of hand-made paper and promote its image as an eco-friendly and community concerned enterprise. The enterprise sells its products to wholesalers, distributors, or exporters and to printing presses or printers.

The enterprise is seeking opportunities to form strategic alliances with various business companies and organizations for promoting its products and the enterprise image. It further explores e-commerce (Internet) for marketing through facilitating organizations such as ANSAB.

**Technology and Production Process**

The Malika Handmade Paper Pvt. Ltd. produces 20” x 30” sized paper (MHPL, 2000). It processes the 40 and/or 20 grams paper for the Kathmandu market. Depending on market demand, it adds to its product line ranging from 10 grams to 40 grams in weight (MHPL, 2000). The most profitable product in size and weight holds the major share of production in this enterprise.

Papemaking involves a simple processing technology. The main tool for the processing is a frame that is usually made up of wood and nylon net. This enterprise uses a beater machine. In Kailash, the beater machine runs manually. It is designed to run by pedals. To bake the pulp, the enterprise uses cooking vats. A diesel or kerosene drum was cut and used as a cooking vat because it is cost effective. Following is the list of main machinery, tools, and accessories for the enterprise.

The Malika Hand-made Paper Pvt. Ltd. has planned to process 145 kg of dry Lokta bark a day at 100 percent capacity from the seventh year onward and it is expected to operate eight full months in a year to consume 34,800 kg dried Lokta bark annually (MHPL, 2000).

Main supporting material used is Caustic soda or ash for cooking Lokta bark. The enterprise uses the former one due to efficiency and quality concerns.

Firewood is the main source of fuel for cooking the Lokta bark. Firewood is procured from community forest areas and is harvested according to the operational plan of the forests by community forest users. Dried firewood is bought at the factory site. A fuel-efficient stove is used to reduce the quantity of firewood consumed.
The beater machine that grinds the Lokta bark runs manually. Water force is an alternative source of energy to run the beater machine. Since adequate water force all year round is unreliable in the Kailash area, it is difficult to maintain water current to run the ‘Ghatta’, (turbine) which operates the beater machine.

By the beginning of the year 2000, the enterprise had started production. It has its own building and has 500 frames. It has a beater machine with a capacity of ten kg per hour (MHPL, 2000).

c. Economic Opportunities

A total number of 217 households own this enterprise through their forest user group and entertain the profits generated from it (Binayak Pimidanda FUG, 1999). They get an attractive price for the collected Lokta and firewood that is primarily used in this enterprise. This enterprise also provides a handsome amount to the forest user group as a forest product collection fee. This enterprise employs more than 12 local people in paper making activities and creates employment for many more in seasonal and causal activities. Nearly 500 households in adjacent communities are the secondary beneficiaries of this enterprise and are mainly benefited from the sale of raw materials to the enterprise. Roughly half of the primary and/or secondary beneficiaries in these households are women. The enterprise generates annual income of about NRs 1,050,000 for the local suppliers or collectors of Lokta and firewood and about NRs 450,000 for direct employees in this enterprise. Other income generating opportunities in season also exist for the members who transport caustic soda and packaging materials for the enterprise. Assuming that 60% of raw material and 100% of fuel wood comes from the primary beneficiaries, a conservative estimate shows per household income for primary beneficiaries (217) increasing by NRs 3,225 annually from the sale of Lokta and firewood to the enterprise. If the remaining 40% of Lokta is sourced from adjacent communities, per household income for secondary beneficiaries (500) will increase by NRs 738.

d. Natural Resource Management

The region around Kailash is a suitable habitat for Lokta. There is around 5,000 hectares of Lokta forest in the Malika region, which is a catchment area for this enterprise. The inventory made by ANSAB in 912 hectares of forestland, which is the area for participatory management by Kailash community as community forest, indicates that there is 1,13,350 kg in stock of harvestable dry Lokta (Binayak...
Pimidanda FUG, 1999). Additionally, the area supports more than 1,000,000 small plants (less than 3 cm in diameter at 30 cm above ground and more than 30 cm in height) and more than 50,000,000 regenerating plants (less than 30 cm in height). If these 912 hectares of forest is properly managed, it can supply more than 20,000 kg of dry Lokta bark on a regular and sustainable basis (Binayak Pimidanda FUG, 1999). While there is a large area of forest in the region, this area can easily sustain many small scale enterprises and some large scale ones too if a scientific harvesting system is applied.

Combining this inventory result with the preliminary participatory resource assessment in Kailash, a total supply of more than 100,000 kg can be estimated in the catchments of this enterprise. This enterprise’s share of the supply of total Lokta in this region accounts for less than 35% of the total. The enterprise purchases sustainably harvested raw materials from organized collection communities or community forest user groups.

e. Observations and Lessons

This enterprise was registered at the Office of the Company Registrar, Kathmandu. It is also essential to register this enterprise in District Cottage Industry Office (DCI), Bajhang. To legalize the enterprise, DFO provides a recommendation to the DCI office. Due to absence of regulatory clarity, the DFO finds it difficult to forward the process of registration with DCI. This delay in taking necessary actions on the part of regulating authority is hampering enterprise operation, particularly in marketing and sales. The lesson from this is that at the implementation level, DFO should be made part of any processes leading to enterprises, and secondly, the policy confusions, if any, have to be identified and brought into national debate for revision.

ANSAB Equity Fund has invested fifty percentage of total investment and this is one of the prime factors leading to enterprise development. In the community inhabited by poorest members in the country, financing through such provisions has been critical to the success of the enterprise.

This area is endowed with abundant Lokta resources that can supply adequate quantities of Lokta bark in a perpetual manner. This is one of the main reasons for the establishment and operation of the enterprise in the locality.

Acute food shortage is a major livelihood challenge in the area. People are forced to allocate their time to activities that return immediate food items required. As a result, FUG members face great difficulties in allocating time to activities that yield cash and other long term benefits.

Papermaking requires sunny days and it is extremely difficult in colder locations. While it was expected at the outset that the enterprise would run for about eight months, actual experience has indicated it could operate for less than seven months a year. The technical production feasibility (i.e., due to climate etc.) is an important factor affecting enterprise finance.
Chapter 3

ANALYSIS AND DISCUSSIONS

3.1 Overview of CBFE Modalities

Forest enterprises exist in various modalities, which can be outlined in aspects of ownership structure, linkages to raw materials, target market, seasonality of operation, technological sophistication, management structure, product types and similar characteristics. On the ownership dimension, there are 5 main types envisaged (sole, FUG, consortium of FUGs, co-op, private limited). A consortium of FUGs is somewhat different from an FUG alone and a co-op. In terms of linkages to raw materials, most of the economic and enterprise activities are based on raw materials drawn from community forests. The sole enterprises are dependent on raw materials mainly from private sources.

Many of the enterprises focus on domestic markets as their target. Enterprises dealing with high value low volume product, such as essential oils, have their markets outside the country well up to Europe and America. With respect to products lines, enterprise initiatives exist in almost all possible products lines that include timber, fuel wood, grasses, fodder, essential oils, medicinal plants, and other NTFPs.

From a technological point of view, many use simple and locally available technologies. Some process the products physically while others add value simply by changing the place of trade, such as Janaki FUG. The more sophisticated the technology, the more difficult it becomes for the community to manage the enterprise.

FUGs have emerged as a very strong local institution for facilitating economic activities in the group as well as nearby communities. Some of them have undertaken well planned enterprises while others have carried out discrete activities that enhance the economic wellbeing of the community members. They are owned and managed through a two-tier structure of Assembly and Executive Committee, and are legally recognized as self-governed institutions to manage community forests as per approved forest management plans.

Enterprises also differ in terms of seasonality of operation. Those that collect NTFPs and sell to traders in crude form have a limited season of operation, mostly confined to a few months in the winter. Timber processing enterprises do not operate in the monsoon, as it is difficult to season the wood at that time of year. Papemaking enterprises operate generally in the summer or on other sunny days, provided the raw material is in plenty.
3.1.1 Sole Ownership

With this kind of modality, entrepreneurs within the framework of community forestry can use their own skills and take advantage of resources which have a market value. They are not encumbered by administration and management of bigger enterprises. They are free to find their own buyers and to use their own entrepreneurial ability. It works best for existing products that have efficient market chains, where the sole proprietor can access information on markets and where price is relatively stable.

The disadvantage of a sole enterprise is that it is entirely dependent on only one individual, the owner, and it has little leverage in terms of policy issues unless it can grow in size and become influential. In the case of a landless farmer using common property, it is entirely at the mercy of the FUG. It may be difficult to get technical assistance for pest management, supply of high quality seedlings and so on. Sole owners of enterprises also have to invest all the capital and take all the risk. It may be difficult for sole entrepreneurs to finance the start up costs of their business, such as infrastructure, as in the case of the irrigation canals needed in the example of Large cardamom producer of Dhanmane, Ilam (see case study for detail).

3.1.2 FUG Enterprises

The three FUGs present a diversity of perspectives and issues in relation to enterprise development. The Terai FUG demonstrates tremendous economic potential particularly through the promotion of timber, if they are provided with suitable support services. The FUG within the upper as well as the lower middle hills have Lokta, Chiraito, Amriso, Large Cardamom and several other commercially traded NTFPs, and the cases here demonstrate the possibilities of marketing by FUG with basic support services provided by supporting institutions. The challenges behind FUG are the availability of useful market information, managing start up capital, technological know-how, and developing overall management that best satisfies the needs of disadvantaged users.

The main goal of the FUG is not to maximize profits, but rather to seek to serve the larger group as far as resources allow. This is apparent through the way in which activities are supported. Even for a large scale FUG such as Shankamagar, activities tended to focus on small scale inputs. This results in one of the features of FUG-based enterprises: the variety of products which they support. This would imply that many interest groups among the members are able to receive support from the FUG in order to take advantage of resource and market opportunities. The challenge with this is that the FUG does not have the capacity to provide the technical skills needed for selecting suitable species or for regeneration techniques such as in the case of nurseries for timber species. However, they do seem to have the capacity to design and monitor management and harvesting rules for economically important species which households use for subsistence and which generate income for the FUG at the same time.
In the case of timber logging, they also seem able in some cases to hire salaried staff that are responsible for operations. In addition, FUG committee members are compensated for their time, which encourages a more professional attitude towards looking after the affairs of the FUG.

In addition to supporting a variety of enterprises, FUGs also combine this with welfare services for the members and discounts for forest products for families in times of need. This helps to encourage a feeling of ownership by members and loyalty to the FUG model for managing their resources.

One important opportunity that all FUGs share in promoting forest products is that they have the resources under their control. But the recent government orders restrict FUGs to commercial marketing of the forest products, and they are not allowed to amend operational plans until two years after the first preparation. The FUGs still lack adequate technical capability in sustainable management of the forests, in particular, in relation to making a decision as to whether or not a resource is adequate for them and if it is wise to establish any enterprise activities for surplus or alternative ways of filling shortages. FUGs also lack market information on non-timber forest products. In the Terai, the products that are promoted are mainly timber, and very little is known about NTFPs.

Opportunities also exist to contribute to the livelihood of the poor and the disadvantaged through the framework of community forestry, with FUG as the leading community institution. This is indicated by Dhanmane FUG’s decision to allocate the Large Cardamom planting areas in the community forests to the poorest/landless user in the group. But instances in other areas indicate that there is an increased risk of benefits being captured by the local elites with increasing commercialization of the products.

Hill FUGs differ from the Terai in respect of accessibility and marketing infrastructure. But the low volume/high value NTFPs in remote locations have no less opportunities for marketing than the timber products in the Terai. The groups in the hills are smaller and relatively more homogeneous than in many Terai situations. This may be the one reason why hill FUGs have achieved greater equity impact compared to the FUG in the Terai. The FUG enterprise activities are diverse and lack long range strategic planning to maximize the opportunities.

### 3.1.3 FUG Consortium Enterprises

The example of the Chaubas FUG consortium illustrates a method of using local established institutions in order to introduce relatively capital intensive technology in order to improve products and achieve economies of scale thereby achieve more efficient marketing.

The decision to organize a private company was based on assessing the regulations governing cooperatives. A cooperative was not feasible because the 4 FUGs were going to be the owners of the enterprise and not the FUG members.
and thus the minimum number of shareholders (25 members) could not be attained. So the enterprise was registered as a private limited company with a board and shares held by each of the FUGs.

Institutional issues relating to the empowerment of women and the disadvantaged, transparency, leadership, and account keeping are also very important and need to be addressed as the enterprise gains momentum.

FUG consortium enterprises share similar opportunities and challenges as FUGs, except that these issues in the case of consortium enterprises are more complex. One advantage for them is a large resource base for attaining an economy of scale.

### 3.1.4 Co-operative Enterprises

Since one of the principles of co-ops is that members derive benefits according to their use of the services, the services and benefits should exceed the transaction costs for the members, otherwise they will not be interested in remaining with the organization. If additional expenses are incurred due to the management overheads of the co-operative, this should not be reflected in the lower prices for suppliers, otherwise it would not be able to maintain its membership.

The members should decide whether the functions are for procuring inputs, sourcing financing, providing savings and credit services, supporting marketing functions such as collection of information and bargaining with buyers, technology inputs, or whether the co-operative is also acting as a broker on behalf of the producers by buying their product and reselling it. There are many implications for each of these functions, and these will also result in different kinds of expectations from producers and co-operative members. For example, the Praja NTFP Co-operative was primarily buying product and reselling it for members. This was clearly a useful function and enabled it to link up with an export buyer. In order to do this it needed reserves of capital for short-term trade. However, co-operative members also wanted to be able to borrow individual emergency or production loans. In order to do this, the co-operative would have to decrease its capital reserves for purchasing NTFP.

Both in the case of Praja NTFP Co-operative and ACPC, there is only limited participation and capacity building of the board members from the production villages. The management of a co-operative is inherently complex, especially with faraway markets. This could have the effect of disempowering the members rather than building their capacity to be entrepreneurs. On the other hand, the equity benefits are very clear and were clearly the reason for Praja to choose this kind of modality.

The PCDP model was an attempt to link collectors with access to raw materials from remote areas to the road head buyers, without having to be as dependent on the road head traders which also controlled the information on price and demand. In order to establish forward linkages the co-operatives established a
marketing unit during the harvest season. Although theoretically a viable strategy, the management costs of the unit could only be covered by a certain minimum volume of product. There are concerns that the resource may not be able to sustain this level of harvesting. Therefore at this point in time, resource assessments are one of the key areas which will need support. This was also the case with allo producers for ACPC.

3.1.5 Community Based Companies

The examples of HOPL and Malika Handmade Paper Private Limited illustrate the possibility of creating local associations, yet with a different modality than that of co-operatives. Shareholders can receive benefits such as in the case of a co-operative. However, there doesn’t have to be any other savings fund, unless the company and shareholders decide that it is useful. The board representatives can be selected in order to ensure equity and participation of all stakeholders.

The challenge for shareholding companies is that the most disadvantaged may not be able to afford the shares. In addition, influential members of the community can try to acquire a majority of the shares, and thereby end up as important decision-makers, since they are the ones with the most capital at risk.

Decision making structures do not need to be any different than those in a co-operative. However, since there is no act specifying how often shareholders should meet, or the representation on the board, it is really up to the entrepreneurs to work towards setting up a transparent and equitable system.

The FUG consortium in Chaubas is essentially run as a shareholding company, and the issues that arise out of that modality have already been described. In the case of HOPL, the company was set up in order to present clear ownership of the assets (which represented a sizable investment) by the financing institutions. This was not left up to chance by having FUGs themselves be shareholders. Instead it is the individual collectors who are shareholders, and they receive dividends on their shares according to the net profits at the end of a year. There is no guaranteed dividend. However, the co-operative is required by the Co-operative Act to actually put some of its profits aside for this purpose.

The other difference is that should a company be liquidated, assets remaining after liability is paid off or will be sold off. But shareholders are only entitled to receive the market value of their shares. On the other hand, co-operative members are the owners of the assets and will all receive an equal share of the assets.

In conclusion, it can be said that before deciding which enterprise modality should be chosen for an association of producers, the implications need to be very well understood, both by the planners and by the prospective entrepreneurs themselves. It is often easier to set up an organization structure than it is to try to rectify one which was poorly designed and is not living up to the expectations of its members.
Regardless of the type of structure, a successful association will rely heavily on the capacity of its manager. The board itself is relatively ineffective to respond to sudden changes in the marketplace and will not be able to maintain the flexibility necessary to exploit opportunities. However, a good manager will be chiefly responsible for ensuring that the enterprise is positioning itself well and taking advantage of customer needs.

If these kinds of enterprise modalities are supported, there should at least be partnerships so that if one of the partners becomes incapacitated or ill, that is not the end of the business. The enterprise owners should also diversify products so that they are not dependent on only one source of income. It is especially important to have alternate crops with a short period to maturation in addition to slow growing species, which will not yield income for several years (such as large cardamom and tea). Bank loans at low interest are helpful for financing these long term crops, but are difficult to access under the present conditions.

### 3.2 Factors Related to CBFE Genesis, Operation and Growth

The 11 CBFE cases suggest that there are certain factors that contribute to or hinder the genesis, operation and growth of enterprises. These include external inputs, marketing outlets, community characteristics, natural resource base, technology, and policy factors. Discussions on how these factors are related to community based enterprise success and failure are discussed below:

#### 3.2.1 External Inputs

Most of the CBFEs studied emerged or were sustained through one or the other forms of external input. Principal forms of such inputs included awareness raising, technical capacity development, financial support, and marketing linkages.

**a. Awareness Raising**

The foundation of CBFE emergence is awareness. The main areas prospective entrepreneurs need to be aware of include legal awareness of local control over resource management, local resources, markets and enterprise potential. In most cases, this has been initiated by external agencies. Communities in the Malika region of Bajhang knew from ANSAB staff that community access to Lokta is possible through the revision of operational plans, and that it can be commercially harvested for paper making. Janaki FUG leaders knew through exposure visits and awareness workshops that an organized trade of NTFP could be useful in creating incomes at local level. Cash crop producers and traders gained such knowledge through their own efforts. Like other adoption processes, CBFE adoption starts with awareness and the source of information may vary case by case.
Analysis and Discussions

Even during the period of enterprise operation, raising awareness of community members that have a stake in the enterprise is crucial. In Chaubas, literacy classes and other awareness raising activities were conducted to empower men and women users of the forest and beneficiaries of the enterprise to help them understand the critical financial data of the enterprise. Creation of a wider sense of ownership among community members is another challenge that has to be addressed through suitable awareness raising activities.

b. Technical Assistance

Community people need technical assistance in creating enterprises. Chaubas enterprise owners and managers received periodic trainings and several such services through personal contact with relevant experts from the supporting project. Project people guide in forest management, technology selection and organizational management. HOPL and MHPL received substantial technical support in revising FUG operational plans and processing technologies for aromatic plants and Lokta. However, for enterprises dealing with products such as broom grass, tea and large cardamom cultivation that involve indigenous technologies, outside technical support is not a factor in enterprise creation.

Technological design of the enterprise is a very complex issue depending on the type of products being produced. For example, the dimensions of a sawmill suggested by technical experts were not appropriate to the company owners who then had to make corrections on their own. This implies that enterprise managers should fully participate in and understand the technical dimensions of the equipment or machinery being selected so that they can evaluate whether it can fit into their reality or not.

Access to sophisticated technology was demonstrated mainly in the two case studies of Chaubas and HOPL, who both obtained access to processing technology with the support of projects. Without this support it is unlikely that such access could have been achieved.

Technical support in many aspects is needed to sustain CBFEs. Kankai and Shankamagar need technical support in revitalizing the forest ecosystem and the establishment of plantations. If the resource base is not conserved or revitalized, the economic opportunities being generated will vanish. In Shankamagar, major chunks of the forest are overstocked and a more scientific forest management plan may allow more forest products to be extracted on a sustainable basis. The group lacks adequate technical skills and the DFO staff are oriented to provide such supports. This type of situation exists in many cases. The tea cultivator of Ilam also needs technical support in coping with rodents. This means that economic opportunities may be maximized if appropriate technical assistance is provided in resource management.

In order for FUGs to better create economic opportunities for the poor and the disadvantaged, they have to be provided with technical support in forest...
management and sustainable harvesting. This should be combined with marketing and business development services. Also, in order for the disadvantaged groups to take an equitable share from the enterprises, there should be some support, preferably through NGOs, to empower such groups so that they can better participate in the decision making process.

Both in the case of the Praja NTFP Co-operative and ACPC, there is only limited participation and capacity building from the board members that are from the production villages. The management of a co-operative is inherently complex, especially with far away markets. This could have the effect of disempowering the members rather than building their capacity to be entrepreneurs. Enterprises may therefore improve their performance if support for institutional development aspects is provided from outside agencies.

Accounting and record keeping is a crucial issue in the institutional development of CBFEs, particularly in the context of widespread fears regarding misuse of funds. CBFEs have therefore hired professional people to create special mechanisms for maintaining financial records. To promote transparency and active participation, CBFEs need support in devising ways to manage financial information.

Financial Support

Financial support has also been equally crucial for CBFEs. Many communities lack money to pay instant wages, buy equipment to add value to products and pay for qualified staff. In the Praja co-op, the poor tribal people could not wait to receive their money after aggregating the products and selling them at higher prices through the co-op. PCDP’s support in working capital was crucial to pay collectors instantaneously. This was particularly important in the case of Praja who have little or no land for collateral for a loan from a bank. Janaki FUG needed money to pay to collectors, and this was managed through local loans as well as advances from traders. In the case of HOPL, MHPL, and Chaubas, financial assistance was needed to install production technology that was the backbone of the enterprise. Even corporate or FUG consortium enterprises like these were in need of external funds as there was little money from the owners.

Poverty and cash needs sometimes deflect the flow of money from what maximizes enterprise revenue. For example, the Praja NTFP Co-operative was primarily buying product and reselling it to members. This was clearly a useful function and enabled it to link up with an export buyer. In order to do this, it needed reserves of capital for short-term trade. Co-operative members also wanted to be able to take out individual emergency or production loans. In order to do this, the co-operative would have to decrease its capital reserves for purchasing NTFP and divert its funds into risky individual loans. If loans were not repaid, it would have a negative impact on the operations of the co-op.

Shankamagar and Kankai, however, have generated a huge amount of money from the sale of forest products. Any further enterprise activities that they may
want would not generally be limited by financial constraints. This means that big FUGs in the Terai, with a relatively large forest area, can generate funds to finance their economic activities, and possibly of others as well.

At the patch of Dhanmne community forest where the large cardamom producer is cultivating the cash crop, irrigation facilities are limiting. A small canal can be made from some distance away. This is costly, given the high cost of labor and the lack of financial resources. If a poor farmer is to be supported through small-scale enterprises, infrastructure support such as this is essential.

d. Marketing Support

CBFEs in several instances have emerged as a result of assured marketing linkages from the assisting organization. Many of the CBFE products are sold outside the locality, often on international markets, and community based entrepreneurs can hardly market the products to such places on their own. BCP made buy back agreements with paper producers who decided to invest in papemaking only after the market guarantee was established.

Makalu Barun Conservation Project assisted the marketing of ACPC products in Kathmandu and outside by supporting staff as well as using its own physical facilities. ACPC is an example in which artificial marketing conditions were created through subsidies in order to encourage co-operative members to remain with the organization and strengthen it. ANSAB has continually been assisting in the marketing of essential oils produced by HOPL. MHPL was linked to an exporter under the initiative of ANSAB and an agreement for sale of paper has been reached, while ANSAB has assured the required quality and quantity to the buyer.

Chaubas sawmill was assisted with marketing information before as well as during the operation, which revealed that pine timber can be sold in Kathmandu at prices that can sustain the enterprise. Products such as broom grass, large cardamom and tea have better established markets, and in such cases entrepreneurs have been able to market them without any special assistance. But they would be greatly benefited if they have access to useful marketing information.

Interestingly, sole enterprises operate without marketing services as is needed in the case of other CBFE modalities. One of the reasons is that they select products with existing markets, which minimizes marketing risks.

3.2.2 Marketing Outlets

The marketability of the product is the deciding factor in enterprise success. Marketing outlets that include market demand, channels, infrastructure, and information systems have been found crucial to CBFE emergence and operation.
a. Market Demand

Enterprises ultimately thrive on market demand that is created through consumer needs and willingness and ability to pay. Many of the forest products, particularly NTFPs, have the unique potential to satisfy human needs locally or internationally.

Pine timber (Pinus patula) is known for its value in internal use, and Chaubas enterprise found buyers in Kathmandu that prepare fabricated portable houses, furniture, and other consumer goods. Although there are close substitutes for this, such as Alnus, Dalbergia, Pinus patula is sold at competitive prices along with a difference in product nature. The enterprise was created only after carefully ascertaining the presence of market demand.

NTFP trade by Janaki and Praja co-op is also sustained by demands for alternative medicines in various parts of the world. A number of medicinal plants have high value offered by consumers via the intermediate traders. Lokta hand made paper has also very good local as well as international markets for traditional as well as modern uses. The emergence of value adding companies at the national level has boosted the demand for Nepali paper. Paper making enterprises have scope for marketing.

Demand for and prices of essential oils, especially Jatamansi, have been fluctuating. But intensive selling efforts have been successful in selling the products of HOPL. Allo fiber products also have a variety of uses as handicrafts, bags, cloths, and even for mixing with leather. Market is again a factor of success, and ACPC could have earned more money if its marketing efforts were more competent and creative.

The case of ACPC is an example of where new products are being developed for new markets. This is the most difficult and risky kind of product and as can be seen from that case study, also takes the longest to become self-reliant. On the other hand, it carries the highest rewards but fewer people will be able to take advantage of the market opportunity. This can be compared to weavers of Allo bags in Humla, who earn much less but can always sell their product locally to traders.

Enterprises have responded to market forces and opportunities in various ways. For instance, FUG enterprises tapped existing markets for NTFP by centralizing management of the enterprise and working out agreements with existing road head buyers thereby cutting out middle traders. FUGs with timber resources...
focused on local markets within the FUG or nearby users. FUG consortiums used a strategy of investing in technology to add value to timber, thereby investing in centralized production in order to satisfy demand in distant markets. This strategy was also used by community owned companies which used technology to add value to NTFP through production of essential oils. Centralized management in order to improve manufacturing and marketing was used for Malika Hand Made Paper. In all these cases, resource itself was not the key factor in determining the strategy, but rather the need to overcome problems which existed with market access, and a need to increase benefits to the collectors or producers.

Community owned enterprises were more responsive to changes in market demand than FUG enterprises or FUG consortiums. This is because of more efficient management and available support rather than a direct implication of the enterprise modality itself. Co-operative enterprises made attempts to centralize marketing functions for NTFPs and handicrafts. In the case of NTFPs, the co-operative targeted both existing nearby markets as well as new distant export markets. In the case of handicrafts, mostly new and far away markets were targeted. In both cases, the co-operatives were situated in remote areas and had to overcome problems of communication with their markets and with the production units within the co-operative. Sole enterprises diversified their products and worked within the framework of common property management in order to access land. They traded a combination of both forest and agricultural products and focused their efforts on cultivation of both.

b. Marketing Channel

Janaki FUG could easily jump from resource management to trading due to the existing trading channels of NTFP trade. They simply had to take over the existing channels rather than establish new ones. The large cardamom producer at Dhanmane community forest in Ilam and the cash crop producer in the same district produced large cardamom, broom grass, and tea which have established trading channels linking products to markets. Presence of marketing channels was one of the decisive factors in enterprise selection, and this led entrepreneurs to a less risky way to make profits.

Lokta paper offers a case where the product has a market but there exists no established marketing channels. Lokta paper producers in Parbat and Malik enterprise in Bajhang were therefore provided a linkage to the market by BCP and ANSAB. In Humla, when HOPL converted raw MAPs into essential oils, the existing channel that carried raw MAPs was not applicable as the Nepalgunj traders (who are the immediate forward links to Humla’s MAPs) were new to buying and selling the oils. ANSAB therefore had to directly assist in the marketing of the HOPL processed oils.

The ordering, producing and delivery cycles of handicraft products in the case of ACPC for the export fashion industry are very challenging for remote mountain areas.
Although handicrafts can find local markets, particularly in tourist areas, not all forest products have a prospect for sale at local level. The timber demand, in particular, is very low at local level. MAPs are mostly exported. Factors that assist enterprise development in remote areas are therefore an efficient linkage with the outside markets for effective cycle of ordering, producing and delivery. This naturally entails a lot of effort in management and marketing, and good management has to be hired and maintained for efficient maintenance of these channels.

c. Infrastructure

Infrastructure in terms of access roads and communication facilities is important to the successful operation of forest product enterprises. In the case of high value low volume product such as MAPs and essential oils, even the human back can carry the products down. But for high volume products such as sawn timber or logs, as in the case of Chaubas and Kankai, transport facilities, at or close to the gate of the enterprise, is a must. Communication facilities enable enterprises to review marketing strategies based on market forces and trends. Many road head traders, such as the large cardamom traders of Ilam, contact Indian traders by telephone and set purchasing prices every day. CBFE managers, if have access to a fast communication means such as telephone, can access, verify and crosscheck information on prices and demands from traders, manufacturers or other downstream buyers.

Remote mountain areas sometimes have traditional market linkages and established channels of communication. However, they are not so useful for marketing. Therefore when selecting enterprises and products, it is important to consider both existing channels of information and the new opportunities which might be available due to the introduction of technology such as reasonably priced remote area linkages for telephones, which are supported through government subsidies.

d. Marketing Information

The third component of marketing outlet is information. There may be a market as well as infrastructure but not marketing information. Many enterprises have suffered from the absence of useful marketing information. The price trends of forest products often follow unpredictable patterns. The price of large cardamom doubled in the year 1999, while the price of Jatamansi dramatically fell in 1998. This resulted in CBFEs realizing less benefits than were expected or were actually possible. CBFEs have limited capacity to maintain market intelligence so as to predict future trends and devise strategies.

Market imperfection, lack of perfect competition, and the lack of transparency characterize the forest products markets. This creates a great challenge for the CBFE as they have limited resources and capacity to access and manage marketing information systems.
3.2.3 Community Characteristics

Leadership quality, local skills, local institutions, demonstration, etc., were some of the examples of social factors affecting CBFE development.

a. Leadership

Leadership has been the prominent factor in determining the enterprise. In Janaki FUG, leaders were first briefed on the scope of NTFP trade and they mobilized the entire community for this. In Shankamagar and Kankai, local leaders took control over the national forests as community forests through severe political pressure. Poor quality leadership in ACPC created ineffective organizational performance, and the enterprise appeared as if owned by the facilitator hired by the management. This resulted in several problems in enterprise management.

Even in the case of sole enterprises, leadership has played an effective role in mobilizing family resources. The large cardamom producer of Dhanmane and the cash crop producer of Kolbung, Ilam are led by the heads of the respective households, and they are equipped with multiple skills and have a deep sense of commitment to what they are doing.

b. Indigenous Expertise

Enterprises that build on indigenous expertise have been found to be more successful. Papemaking, for example, has been a traditional activity in parts of rural Nepal. This made Lokta Handmade Paper Producers at Parbat and MHPL in Bajhang more comfortable in initiating the enterprises. This is not only because communities feel confident but also because it minimizes fear of technological failure as in the case of Chaubas. The Chaubas Enterprise technology was new and communities had to bear the high cost of learning and finding a suitable technological set up.

There may not be any outside technical support in some rural technologies such as cardamom cultivation, harvesting, and packaging. This has not only a competitive market but also a long tradition of cultivation and knowledge. In this case, the producer of Dhanmane started his large cardamom based enterprise activity upon having access to a patch of suitable forest land from the FUG.
c. Local Institutions

Whether or not poor people can be supported in forest based enterprises depends to a large extent on local institutions. Dhanmne FUG decided in the group to allot the part of forestland suitable for large cardamom cultivation to the poorest member of the community. HOPL was established under the active involvement of HCDA.

Groups that are more homogeneous in terms of ethnicity, wealth, and political ideology can make decisions more effectively, and this may lead to more successful enterprises. In the present study, the group structure was not an explicit variable to assess in terms of its effect on enterprise success, yet the tentative observations indicate homogeneity is attributable to enterprise effectiveness. Malika paper in Bajhang and HOPL in Humla are roughly on opposite sides of the variable. The enterprise management process of Malika is smoother than that of HOPL. This may be one reason why the financial status of the two enterprises is different.

Management quality is also a factor related to enterprise. While the owners themselves manage sole enterprises, the companies have hired professional people.

In Chaubas, participation of women and poor in the enterprise and FUG has been considered a major institutional development issue. Project and DFO have conducted several empowerment activities as part of strengthening the institutional base of the Chaubas enterprise.

In the case of ACPC, although it was set up as a co-operative, it was effectively run by the manager as a sole proprietor organization because of the inherent difficulties of communication with co-op members in remote and faraway villages. Successive managers were effective in their role as marketing intermediaries, staying in touch with buyers, procuring inputs needed for production and distributing orders to weavers. However, they could not resolve the lack of trust between weavers and the center.

ACPC also showed that conflicts arose once people in the area realize that a resource had a market value. CBFE success, therefore, depends on the local institutional capacity to manage conflicts for constructive purposes.

A sole enterprise linked to a common property resource has to face institutional insecurity in achieving economic efficiency. S/he may not opt for investing in a communal forest, where individual use right is defined for a limited period and FUGs always reserves the right to relocate the forest land to any other users. This may be the case with the large cardamom producer at Dhanmne, where other users have started demanding the allocation of forestland on a rotational basis to all users interested.
d. Entrepreneurship Culture

Certain ethnic groups from the mid hills do not engage in as much trading as those from mountain areas that have linkages with Tibet. In addition, the ethnic groups in the mid hills that are predominantly Hindu are less likely to accept that the females of the household leave the village to go to urban centers and engage in direct marketing. These and several other cultural factors are particularly likely to affect sole enterprises.

e. Transaction Costs and Economies of Scale

Balancing economies of scale with the transaction costs of meetings and interactions may enhance enterprise success. Enterprises have to incur expenses for meetings and discussions amongst affiliated/interested members. When products have to be aggregated and sold in bulk in order to obtain better prices, the members should not be spread too far apart as this makes conducting meetings difficult. In the Praja community of Chitwan, people beyond 3-4 hours of walking distance apart were not included in the co-op although adding more members could mean more quantities for better prices. The geographic spread of ACPC members is more than that of Praja, and tried to combine too many villages with different ethnic groups, causing a lack of unity and difficulty in communication.

In HOPL and Chaubas, several communities have joined together. As the companies had a more organized management structure, the need for interaction among the shareholders could be minimized since individuals are represented in central committees. Companies such as these have the potential to manage a greater number of owners or affiliated people spread over a great distance.

This means that depending on the modality, the size and geographic spread of the enterprise, the owners group may vary. If economy of scale is reached, it may be argued that the small group is better than the big one.

f. Economic Objectives of the Entrepreneurs and Opportunity Costs

The Allo weavers in Humla are interested to produce traditional Allo bags used for packing medicinal and aromatic plants even though the returns from their labor are lower, because for them the opportunity cost is also much lower. Weavers in mid hill areas of Nepal in the east of the country had given up Allo weaving because for them it was not worth the time in comparison to the income available from other options. Therefore, they were only interested to take up weaving again if they could develop new products and link up with urban markets. This was possible in the eastern region, where the markets are much more accessible than in the western region. This means that enterprises may emerge when the economic objectives of the people involved can be fulfilled even though the absolute profitability status is not satisfactory to outsiders.
3.2.4 Natural Resource Base

Since CBFE is based on different forms of the natural resource base, various resource characteristics such as the resource type, condition and property rights regime of the resource are crucial determinants of CBFE development and success.

a. Resource Type

The resource type determines the enterprise. A large tract of pine forest in Kavre gave rise to the sawmill enterprise. The availability of MAPs in Humla gave rise to an enterprise processing MAPs. The swampy part of Alnus sp. Forest Dhanmane was suitable for large cardamom production. Different regions of the country have a unique set of commercially useful natural resources. Successful enterprises generally select products to market which have a comparative advantage in their area. However, this also tends to restrict the number of viable resources for the enterprise to exploit.

b. Abundance

The abundance of the resource is a factor affecting CBFEs. In Chaubas, if the pine forest had not been adequate to support the economics of scale of the enterprise (in terms of management, technology, and marketing costs) the enterprise would not be a viable option. In fact in Chaubas, the overabundance of the resource was the driving force behind enterprise development. The mean annual increment of the stands in the Chaubas pine forest was decreasing due to the absence of thinning and of intensive management. The wood processing enterprise was put forward as a solution to encourage intensive management of the forest and improve forest condition.

For BCP, the lack of abundance of Lokta meant that BCP had to acquire permits for Lokta collection from a wide area covering Baglung, Parbat, and Lamjung districts in order to sustain just a few communities. In Humla, HOPL emerged as a result of an assessment of the abundance of MAP resources in the locality. In ACPC, the abundance of the resource affected the decision as to whether or not to start an enterprise. The only villages interested in starting enterprises were those situated nearby a plentiful stock of the resource. The Praja co-op was an attempt to link collectors in remote areas with access to raw materials to road head buyers. One of the pre-conditions for this was the abundance of the resource as the management costs of the unit could only be covered by a certain minimum volume of product. There are concerns though that the resource (even though abundant) may not be able to sustain this level of harvesting.

All of these examples illustrate that resource assessment is a key issue that needs attention if the enterprise is to be sustainable.
Community Based Forest Enterprises in Nepal

Analysis and Discussions

3.2.5 Technology

The enterprises studied here have varied in terms of their degree of technological sophistication. They range from simple local technology all the way up to intermediary and high tech imported technology. The degree of technological sophistication is found to be related to enterprise performance and efficiency. FUGs adopted simple and local technologies to fell, limb, and extract trees and logs from forests and store them in the depot for selling and distribution. This required no external assistance at all. Paper producers in Parbat and Bajhang built on their indigenous expertise in handmade paper making with trainings and supervision which improved paper quality. Malika paper enterprise has a monitoring mechanism to further coach the paper makers and ensure quality. In the case of ACPC, weavers had traditional knowledge of allo and how to harvest and process it in order to obtain the fiber and make the yarn.

c. Property Rights Regime

Enterprises are affected by the particular property rights regime placed over land on which raw materials are produced or gathered. In other words, who owns or controls the property affects access to the resource and the way the resource is managed. CBFEs have mostly relied on either private or community resources for raw materials. Resources from government forests are mostly licensed to private traders or companies, not CBFEs.

The CBFE needs to have some control to ensure access. Chaubas enterprise is owned and managed by a FUG which has its own community forests. When HOPL was being developed, a number of forests and pasture areas were being handed over as community forests that could supply the required raw materials. MHPL was created only after revising the operational plan to incorporate adequate forest areas within the community control. Community-owned enterprises find it difficult to compete with outside traders for access to raw materials from government-managed forests and cannot therefore rely on them as a source of supply.

The property rights regime can also affect the way the resource is managed. The case of ACPC shows that as long as the users monitor the impact of harvesting on the resource, it can be managed adequately.

It is clear that a community must have control of its resource if it plans to initiate an enterprise based on that resource, and in addition, it must have support from the forest management and protection agencies in order to resolve conflicts and enforce its right to manage an area.

Analysis and Discussions
A more sophisticated technology model is offered by Chaubas and HOPL. Although the more sophisticated technologies added value to the products, it was difficult for the enterprise managers and operators to handle the technologies. The machineries cannot be repaired locally and it costs a lot to transport them from the nearest road head. The energy or fuel required for high tech machines is another issue. There are two major options for fuel: fuel wood (as in the case of HOPL) or diesel (as in the case of Chaubas). The excessive need for fuel wood is gradually becoming a constraint in Humla. Enterprises with high tech machinery are associated with high risk and high cost of management. This means that CBFEs having traditional or improved traditional technologies have less risk and better management capacity. Technological advancement can however be a manageable option depending on the locality, the extent of external support, and the technical capacity of enterprise management.

3.2.6 Policy Factors

Policy factors affect CBFEs in many different ways including raw material acquisition, registration, financing, marketing and others.

Raw material acquisition can be affected by the operational plans of FUGs. CBFEs have gained access to raw materials in community forests by revising the operational plan of the related FUG. In the process several hurdles have to be faced including limited forest areas, restrictions on operational plan revision, rent seeking and others. In Bajhang, the revision of the operational plan to expand the area of the community forest to include Lokta management and registration of the enterprise became challenge for the FUG. These problems are extremely difficult for communities to resolve alone, and ANSAB staff have spent a lot of time and effort on resolving these issues.

In registration, several issues are raised unnecessarily creating hurdles to FUG trying to establish forest enterprises.

Financing policy and procedures through the banking sector is quite tedious. While many of the CBFEs demonstrated the need for start up capital, none of them could get loans from the banks. This is partly because the lending procedures are not practical or simple.

Marketing of products through export is affected by burdensome exporting regulations. HOPL, for example, hasto spend a lot of time and money in complying...
with the export formalities of the Department of Plant Resources, Customs, and other regulatory institutions. This job is too hard for village people to perform, and ANSAB’s marketing unit is still assisting in this process. For other enterprises such as the Allo cloth producers, Praja and the Janaki FUG, similar hurdles lie in the way of export markets and so fall to the secondary traders to clear as these CBFEs have not engaged in export function. However, the costs incurred by the exporting traders during the export process are transferred to the CBFE or collectors from whom they purchase forest products.

Changes in policy can also affect CBFEs. In the case of Chaubas, even though the FUGs are stakeholders and have invested community funds and labor, it is not altogether clear what would happen to the assets of the sawmill if the policy changed and FUGs were taken back by Government, or if a ban on the felling of green trees is introduced, or if the equipment is taken back due to mismanagement (an option which was written into the original agreement). Policy changes could further affect the enterprise if restrictions placed by were place by the DFO on the choice of markets available to enterprise owners.

Chaubas enterprise has actually suffered through forever fluctuating policy environment. Green felling was restricted in 1999 and this resulted in the closure of the sawmill due to scarcity of raw materials. The FUG wanted to register the enterprise as a co-operative but as the number of required shareholders were 25 for the co-op, the four FUG were compelled to opt for the company modality as per the regulation.

All enterprise modalities were vulnerable to changes in policy. HOPL was the most successful in influencing policy in order to accelerate the process of handing over forest to communities and ensuring that they could invest the proceeds of sales of NTFPs for the FUG funds. However, this is not necessarily because of the enterprise modality itself, but rather due to good technical support and encouragement from resource agencies which helped to bring about good linkages and rapport with the DFO. DFO interest and support was particularly effective in the case of Janaki FUG and NTFP trade.

### 3.3 Enterprise Consequences

Consequences of CBFE have been explored in three main aspects: economic efficiency, social equity, and natural resource conservation. Economic efficiency is measured in terms of financial viability, income and employment opportunities, and subsidies and provision of social goods. Social equity has been measured in terms of gender impact, benefit distribution among wealth classes, differential access impacts, and inter-community equity. Natural resource conservation is assessed in terms of conservation awareness, sense of ownership, changes or revisions in operational plans, and resource management practices.
3.3.1 Economic Efficiency

a. Financial Viability

An enterprise needs to be financially viable if it is going to have a good chance of surviving. Financial viability has been loosely defined as the capacity to earn to keep production running so as or above the level of break-even. There is mixed opinion about CBFE in terms of their financial sustainability. While the rate of return actually earned can explain the overall financial viability of an enterprise, factors such as debt repayment, working capital, scale of investment, and access to loan and investment capital also give an overall indication of the enterprise finance.

In the case of Chaubas sawmill, PCDP, and Janaki, initial debt incurred for fixed or working capital was repaid in all cases. HOPL and PCDP have enough working capital to sustain their operations. However, PCDP is still on a relatively small scale and is still in a very precarious start-up phase.

Access to capital was obtained by several enterprises using different methods in order to deal with the issue of no collateral. Janaki was an exception in that it managed to work out an agreement with buyers in exchange for a short-term advance without relying on financing support from outside.

HOPL, PCDP, Chaubas sawmill, and ACPC benefited from soft loans and grants provided by projects funded by an international agency. These were medium to long-term loans and in the case of HOPL included both fixed and working capital. In all cases, financing was accompanied by technical assistance for capacity building as a critical support component. Projects used a variety of methods in order to combine soft loans with grants. In the case of PCDP, the supporting NGO, SEACOW, took responsibility for guaranteeing that the loan would be paid back. In the case of Chaubas sawmill, the equipment was actually provided to the consortium as a lease arrangement and there was a provision that the equipment could be withdrawn if misappropriated.

The greatest challenge to these enterprises is not the cash flow but unsold stock. In the case of HOPL, its assets are highly valued due to the large stock of oil, but its working capital is currently only 1/5 of that needed to match expenditures if it would produce more oil. Therefore, it is under pressure to sell its stock even though prices are not very favorable at the moment. In the case of Chaubas, their access to the original target market has been curtailed by the new policy of the DFO, and selling only to local markets as per the new regulations will not cover their operational costs.

The enterprises which are in the best position to access outside capital in the future are Janaki and HOPL. Janaki should always be able to get advances from buyers so long as it maintains good relations and has a market for its products. HOPL has now got fixed assets, which it can use as collateral for a loan, if a bank
Community Based Forest Enterprises in Nepal

is interested in the quality of those assets (this is a problem since the assets are not readily converted to cash due to the remote location of the distillation unit).

Management capacity varies as a function of the complexity and ambitiousness of the enterprise. HOPL was trying to create new export markets and therefore needed to have its representatives travel to the US and Europe in order to attend trade fairs. It also had to monitor prices of essential oils in India and speculate as to whether the prices would rise or not. This level of sophistication could only be achieved with the support of INGOs and high investment in travel fares.

Financial Position and Viability of Enterprises

Sole enterprises are in net profit. The cash crop producer of Ilam earns about five times the investment from broom grass cultivation every year and three times from ginger cultivation. From tea cultivation, the initial expenditures are returned in the first five years and a net income of NRs 2000 per ropani can be earned every subsequent year. A poor large cardamom cultivator of Dhanmane is also earning a net profit of NRs 2000 per ropani of land by deducting total cost of NRs 1325, including the FUG charge amounting to NRs 200 per ropani. Most of the paper producers at Naglibang (about 150 households) have been unable to repay the bank loan (at 18% interest on six monthly installment payments) provided to run the hand made paper individually. While this may provide an overall indication of the profitability status of paper making, it is not necessary that producers pay the installment even if they earn returns.

FUG enterprises are operating above break-even. Kankai earned more than tens of hundreds of thousands as net annual earnings (revenue less variable costs). As the fixed costs in terms of management are partly on a voluntary basis, and the costs of office operation is minimal, this gives a situation high above break-even. Shankamagar FUG is still better in this parameter. Janaki FUG after a year of NTFP trade is also well above break-even point.

By selling 340 cubic meters of wood annually at prices NRs 5347 (local markets) and NRs 7550 (Kathmandu markets), Chaubas enterprise has already crossed the break-even point to recover the total fixed cost of NRs 4,00,000, which comes around 0.8 year from the beginning. In 1998/99, the enterprise had a gross income of over 2 million rupees and the expenditures of over 1.5 million rupees, which indicates a net profit of about 0.5 million rupees annually.

Praja co-op recovered the total cost of NRs 161,017 in the single season, and earned a net profit of about NRs 40,000. In ACPC, financial sustainability may be assessed at two levels: co-op as well as individual producers. The co-op was financially supported by MBCP, particularly to cover the cost of staff and marketing. The club, as such, does not seem to be financially self-sustaining due primarily to ineffective management. The household producers, on the other hand, see benefits in weaving the Allo based products for sale.
Analysis and Discussions

HOPL could not make profit until the third year of production. In the year 1997, two years after establishment, the enterprise suffered heavy losses because of poor raw material quality and a decline in the market price of Jatamansi oil. A large amount of money was stuck with the unsold stock of oil and raw materials. The revenue as well as the expenditures increased constantly every year from about NRs 1 million in the year 1995 to over five million in the year 1998. The company had a net profit of NRs 61,000 in the year 1998, which was not adequate to recover the loss of over NRs 100,000 in 1996 and 0.5 million rupees in 1997. From the year 1999, however, company sales have improved, which may lead to better financial sustainability.

Malika Handmade Paper Enterprise is in the process of selling its first batch of production this year. An agreement with a buyer in Kathmandu has already been reached at a price better than expected. The financial analysis shows that the break even (recovering a fixed capital of NRs 3,50,000) will be reached in less than half a year of the enterprise operation at 80% production capacity. This is roughly equal to return on investment (ROI) of 45%.

The majority of CBFE cases demonstrate strong financial viability. Sole enterprises are much stronger in their financial position than other modalities. These enterprises either make it or fail depending on their financial condition. FUG enterprises are less guided by profits and tend to focus on creating social good and distributing forest products at subsidies. Companies such as HOPL and Chaubas have faced hard times gaining financial viability. They have survived difficult times due to poor financial support from supporting organization. Unlike HOPL and Chaubas, Malika paper enterprise has very good financial prospects. This is because of a product with good market potential and a relatively homogeneous community managing the enterprise.

The product chosen and the market demand are important determinants of CBFE financial viability. Products having established markets such as large large cardamom, MAPs, and broom grass are more financially rewarding. Developing new products such as essential oils, or new markets for existing products (such as Allo products in international markets) have been financially challenging.

Support in terms of marketing and guidance is also related to financial viability. HOPL’s financial position is improving due to continued marketing assistance from ANSAB. Sole enterprises and FUG are, however, financially strong despite absence of such support.

b. Income and Employment Opportunities

All enterprises have created income and employment opportunities. Sole enterprises have created employment for family members. FUGs have employed poor as well as needy members of the community in forest management, plantation nursery, harvesting, and distribution activities. Chaubas enterprise has employed 13 people,
Community Based Forest Enterprises in Nepal

including a forest ranger, and it has benefited 200 people indirectly through the four FUGs supplying raw materials to the enterprise for at least some seasons in the year. Likewise, collectors affiliated with Praja co-op also got an average of around NRs 500 per household in the first season of its operation.

In Shankhuwasabha, 150 women in nine communities are affiliated to ACPC, creating part-time employment. This activity is increasing household income by 20-25% for the households involved. Many of the villages in Shankhuwasabha do not have a daily cash economy. There was a concern that introducing enterprise development into this culture would undermine village values. However, the case of ACPC showed that cash is indeed needed at certain times and for certain items, which are not available in the village. Although it is not entirely a cash economy, cash is certainly essential for some items. However, by ensuring that women in the household have access and control over the cash, it is most likely that this income will be spent in such a way that will benefit the children.

HOPL and Malika also employ dozens of people in the management of enterprise. HOPL is also benefitting collectors of NTFP and firewood. HOPL raised the prices of NTFP and this substantially increased the incomes of the collectors in the region. In the case of Chaubasawmill, new employment was created for 100-200 FUG members amongst the four participating FUGs. This is more than what was created by HOPL because in the case of HOPL, NTFP already had a market before HOPL was started. The new income created by Chaubasawmill was a total of NRs 845,000 for all the years of operation so far, i.e., from the years 1996/97 - 1998/99.

CBFEs, therefore, have the potential to generate income and employment opportunities in local communities and for forest product collectors and others. While sole-enterprises employ family members, other enterprises employ community members in the direct and indirect activities of the enterprise. Companies like HOPL and Malika have employed dozens of people in technical, supervisory, and management positions. FUGs and Co-ops provide mostly part-time employment to many members. It appears that companies created the highest employment opportunities compared to other modalities.

c. Subsidies and Provision of Social Goods

Shankamagar and Kankai FUGs have provided several types of forest products and other services at a subsidy to local community members and institutions. Timber, poles, and other forest products are provided to forest users at prices
lower than the market. The two FUGs have provided support to schools and campuses, scholarship to poor subsides to forest users in biogas installation, health services, skill development trainings and several others social goods at a subsidy or free of cost.

HOPL, Chaubas, and Malika are contributing significantly to the funds of FUGs associated with the enterprises. As a result of Chaubas sawmill purchasing logs from the four associated FUGs, the income of the FUGs have increased tremendously. These funds are being used for forest development as well as community services such as schools, literacy classes and others.

Although sole enterprises do not create direct provision of social goods, their role as stimulator in entrepreneurship development is crucial. The sole enterprise owner of Ilam (cash crop producer) is freely sharing his experiences and skills with other community members. The demonstration of the physical establishment and managerial activities influence his neighbors. He is also providing marketing links to other small producers in the community.

### 3.3.2 Social Equity

One of the primary concerns of enterprise development is that whether or not they have a favorable impact on social equity. Two broad areas of equity may be distinguished: within the community and between the community and other stakeholder groups. Within the community where CBFE operates, impacts on gender and income class are of primary concerns. Since CBFE operates through linkages with a number of stakeholder groups at various levels of value chain in or beyond the community, how the CBFE contributes to the participants downstream is also an equally important equity concern.

#### a. Gender Impact

Sole enterprises have created employment opportunities for both men and women. Among the diverse forms of enterprise works, men and women work synergistically through combining their unique expertise and social roles. In case of need, both men and women can, however, accomplish the complete enterprise activities. But one serious concern is that it raises women’s workload. In farm based enterprise activities such as cash crop production, women’s role is not much different from traditional farming. In Lokta papemaking, men are engaged in collecting barks from forests, while men and women are both involved in papemaking.

In FUG enterprises, the role of women is generally minimal. These activities are outside households, and most of the activities involve no direct compensation. Besides, most of the FUG activities have been volunteered by males, which women can hardly afford in view of the household activities. This is the reason why the representation of women in the committee is low in the two FUG studied. FUG enterprises have, thus, relied on male dominated activities.
Analysis and Discussions

In the FUG consortium enterprise of Chaubas, women have limited access to decision making. One of the reasons for this is that they are mostly illiterate and do not understand the written documents of the enterprise and FUG. Most of the wood-processing job is done by men, and this is also the reason why women have less interest.

In the two co-ops, the involvement of women is better. ACPC involves household level production of Allo fiber cloth. This is useful to women in two ways: household level work and employment of the traditional skill of knitting by women. Many young women have an attraction to Allo cloth making, following the Allo based enterprise activities. This indicates how enterprises linked with indigenous expertise can contribute to the preservation of culture and traditional knowledge. In the case of Praja co-op, both men and women have been involved in collection and marketing, although males dominate the management.

The case of ACPC showed that even when men do not have a traditional role in the processing of a product, such as the Rai in Shankhuwasabha, this can change once the product demonstrates that it is a viable source of income. Similarly, even though women in the Rai culture do not traditionally go very far from their villages, once Allo became an established enterprise, the women were allowed to travel to urban markets and therefore had control over pricing and the cash received for their products. In addition, buyers started coming to the villages and in that case, the group of female weavers in the village agreed on prices amongst themselves and were in charge of selling their products. Very poor women in the village were equally able to weave and sell their products as wealthier women. Time, availability, and quality were the main determining factors with respect to the distribution of benefits.

HOPL has benefitted both men and women in terms of increased incomes from the sale of raw materials to the enterprise. In the management and decision making, men have dominated. Similarly, in Malika it is expected that the enterprise will create benefits to both men and women but decisions will be mostly made by the men who occupy the managerial positions of the enterprise and FUG.

Securing gender impact while gaining enterprise efficiency is a major challenge. Enterprises that have household level activities, such as production, have a more favorable gender impact. Also, if the traditional skills of women are used in the enterprise process, this will lead to a better impact on women. In terms of modality, sole and co-op rank higher than the company and FUG enterprises in having favorable gender impact.

b. Benefits Distribution

Sole-enterprise creates benefits for itself, and the very wealth class of enterprise managers determines who benefits from the activity. The large cardamom producer of Dhanmane, who is the poorest member in the community, has
enjoyed benefits from the activity. The cash crop producer of Kolbung, Ilam is a rich man in the community, and getting richer through his efforts in enterprises.

In the case of FUG enterprises, the forest products are distributed as subsidies, and there is therefore scope for benefiting all, including the poor. In Shankamagar, for example, for all those users that cannot afford to buy the fuel wood from the FUG depot, a ticket is issued at NRs 1 per household that allows them to enter the forest and collect forest products from dead and dying trees. This is a special provision for the poor members of the group who cannot afford the prices that is designed to cover charges for labor in collecting, storing and, guarding the forest products at the FUG department. Likewise, Janaki FUG’s NTFP trade has created added benefits to groups as well as collectors. The exact distribution of benefits depends on institutional factors and leadership characteristics.

Chaubas created employment opportunities for hundreds of local people including the poor. The funds generated through the sale of timber are deposited in the FUG fund, and the equity implications of such funds need to be further investigated. The use of community funds in creating social goods, such as school development and so on, do not favor only the rich members, thus indicating the possibility of a favorable equity impact of FUG funds. However, unless the disadvantaged groups are empowered to take an active part in the decisions, they might not be able to get access to these legitimate benefits.

HOPL raised prices for collectors of Jatamansi and other raw materials used by the company. Also, the royalty paid to the FUG by a company has similar issues as those mentioned in the case of Chaubas. But due to the lack of post formation institutional support to FUGs in Humla, several FUGs lack democratic mechanisms to decide the allocation and use of funds. This situation indicates unfavorable prospects for the poor members to benefit from the FUG funds. In the case of MHPL, while the actual equity implications are not clear yet, the leadership as well as institutional characteristics indicate that poor members have a better chance of receiving benefits from the enterprise as individual payments as well as provision of collective goods through communal funds.

**Impact of Technology on Benefit Distribution**

Benefit distribution can be affected by the use of sophisticated technology. HOPL and Janaki may be compared to assess the effect of technology on equity.

HOPL was an example of a relatively capital intensive enterprise compared to Janaki or PCDP, which were both labor intensive. If one assumes that the income earned by individuals from collection and sale of Jatamansi is approximately similar in HOPL and Janaki, then the amount earned by the FUG community fund is another means of comparison. Even though the community fund is not available to individual households, for the sake of comparison, the total amount earned by the fund is divided by the amount of households in the FUG. In the
case of Janaki, all 77 households, who are users in the FUG, benefited in the first year from selling NTFP and the FUG community fund earned a total of NRs 61,470 (NRs 798 per household). On the other hand, with HOPL, there were 1966 households (3096 collectors) from 19 FUGs that were involved in the enterprise. In 1998, it purchased 18,300 kg of Jatamansi from collectors and paid a conservation fee to the FUG of NRs 15/kg, which would imply that for Jatamansi alone, the FUG earned NRs 274,500 for the community funds (NRs 139 per household in addition to their income earned).

It is therefore interesting to note that even though HOPL was much more capital intensive, and as a result many more households could participate in the enterprise in terms of income alone which was earned by FUG community funds, Janaki FUG actually earned more per household. Since income earned by the FUG community fund is an important incentive linking the enterprise with resource conservation, this kind of assessment is therefore useful for future decision making when assessing the merits of capital intensive vs. labor intensive investments for NTFP enterprises.

There are other benefits which can be measured in the case of HOPL which are not yet apparent in the case of Janaki. For example, as a result of HOPL, the price of raw material, Jatamansi, increased from NRs 17 to NRs 27 per kg. In addition, the enterprise has also been providing employment to more than 10 local people in distillation activities and created many more employment opportunities in its seasonal activities.

c. Community and Outsider Stakeholder Groups

CBFE products are mostly sold outside the community, often on international markets. From the communities to the market, there involve a long chain of traders, manufacturers and exporters that further add place, time and product utilities to forest products, thus providing a forward link to community based natural products. Creation and operation of CBFE definitely have some socio-economic impacts on participants that live downstream. The handmade paper ultimately goes to Europe and America in the form of hundreds of finished goods that are prepared by Kathmandu based companies. Essential oils produced by HOPL also go to India, Europe, Gulf countries, and America. Allo cloth also goes outside the country.

NTFPs, mainly MAPs sold by Janaki and Praja co-op, enter India and beyond. In carrying these products, several parties are involved and seek return on the investment that they make.

Allo cloth buyers in Kathmandu produce file cases and handbags. Main buyers include Associations of Craft Producers (ACP), Mahaguthi, and Himalayan Leather. These organizations, which generate employment and foreign currency, depend at least partially on Allo cloth and fibers which come from community based producers. Likewise, several NTFP traders in Nepalgunj, Chitwan and Kathmandu received raw materials from CBFE such as J anaki, and the Praja co-op. But CBFE,
when better organized and strengthened, replace local traders as in the case of Janaki and Praja co-op, and this may involve some social cost.

In the case of timber and logs, the market is generally local cities or at most Kathmandu. Since logs, pole and timber are bulky forest products, they require tremendous human labor as well as road transportation. This creates opportunity for laborers and transport entrepreneurs as well as associated service industries. Chaubas sells 340 m³ of sawn timber annually, which employs hundreds of people in labor and results in several dozen trips for trucks. Kankai FUG sold thousands of cubic meters of wood in a couple of years, and part of it was sold to other communities in the district at subsidized rates through the district forest product supply committee.

The overall observation is that as the CBFE enhances their production and sale, other stakeholder groups are also benefited through an opportunity to undertake trading functions downstream in the value chain.

3.3.3 Natural Resource Conservation

Small-scale forest-based enterprises can be classified into two categories based on their relationship with natural resources. The first category is where there is direct control of resources. The second category is where there is no direct control but only backward linkages to the supply of resources. For example, FUG enterprises and FUG consortiums have direct management of their resources. On the other hand, all the other types of enterprise have an agreement with FUGs or permits from the DFO in order to access the resource base. The impact of enterprises on natural resource conservation is therefore partly dependent on the nature of the enterprise linkage to the natural resource base.

Conservation impacts are measured in terms of changes in levels of conservation awareness and sense of ownership over the resources, changes or preparation of resource management plans and resource management practices.

a. Conservation Awareness and Sense of Ownership

An increased economic benefit from CBFE has had a positive impact on conservation awareness. Forest users and NTFP collectors of Janaki FUG were convinced after the organized trade of NTFP. Kankai and Shankamagar, likewise, have been more aware of the value of natural resources and the need for their sustainable use. Chaubas and Malika also have direct linkage (but less than that of FUGs) with the forest resources that supply raw materials for the enterprises. The enterprise owners as well as the mass of forest dependent communities were committed to conserving the resource once they saw the benefits from selling Lokta paper and sawn timber that originated from the forests. Establishment and operation of HOPL has increased the benefits to collectors and this has cultivated more conservation friendly behavior (while collecting products) and a sense of ownership over the resources.
b. Resource Management Plans

Following the initiation of organized trade of NTFP by Janaki FUG, members became more concerned about the sustainable use of NTFP. They included new provisions in the operational plan, particularly relating to the harvesting system. Block wise rotation and specific systems of collection were mentioned in the plan. The two other FUGs are also constantly improving their plans to better manage forests along with the enterprise activities.

In Shankarnagar, blocking of forest has been done, and block-specific stocking is taken as part of the forest management planning. Dead, dying and diseased trees are removed from the forest. They are graded according to their quality into timber and fuel wood. Prescriptions are made for each block and are undertaken on yearly basis.

c. Resource Management Practices

Improved forest management activities have significantly improved the overall condition of Shankarnagar community forest. The effective protection of the forest, plantation, thinning, pruning, nursery management and similar silvicultural operations have helped to revive the forest condition. The FUG has established a nursery, but it was not well managed as they were discouraged by plantation performance.

In Kankai, only the fallen trees are removed at harvesting. The FUG established nurseries and carried out enrichment plantation in the open areas, but this was not successful as the area was too dry. They wanted to know more about the reasons why it failed and therefore sent soil samples for testing to a near-by agricultural lab at Jhumka. They could not get any technical advice from the forestry staff. Exotics such as Kapok were recommended for plantation, but all types of planted seedlings died. Users would have to worry over the future of community forest if they fail to cope with this ecological crisis.

Janaki FUG has banned cutting of tree branches while collecting Jhyau from trees. Likewise, they have awarded the collectors for not collecting all the products at a time to aid in natural regeneration. Similarly, they have divided the whole forest into five blocks and have clearly written in their operational plan to leave one block each year from which no NTFPs can be collected. It seems that they have paid adequate attention to the issue of sustainability in collection and trading of NTFPs.

In the case of Praja co-op, resource management of the products sold by the enterprise was assured by common property management and community forestry. The resources, which the co-operative villages collect, actually belong to at least two different FUG. The co-operative, therefore, has to obtain leases from both of these FUGs in order to extract products. Collection of NTFP is closely monitored by FUGs to ensure sustainable practices.
Following the establishment and operation of HOPL, the communities realized that the forest and pasture could not be depended on to supply raw materials sustainably if the proper resource management system was not applied, and consequently their source of income from collection would soon vanish. In order to reinforce the resource conservation efforts made by local communities, the company increased the raw material price to collectors for Jatamansi from NRs 17 to NRs 27 in its first procurement period. The company also paid the conservation premium fee of NRs 15 for each kilogram of plant purchased to the concerned forest user group to ensure the sustainable supply of the raw materials. These communities have started a more scientific harvesting system to ensure the sustainable supply of raw materials for the enterprise. Before 1994, the grasses including Jatamansi in alpine pastures of Humla, used to be burned to allow summer grasses for livestock. As a result of the enterprise, these herbs later turned out to be important cash generating products for local people.

The paper makers of Naglibang now have no resource and they are fully dependent on resources of other villages, which is far from their place. When papermaking boomed up in this VDC, the resource also was depleted in the forest. As they were individual paper producers with no legal ownership of the resource, they had little concern for resource management. Now the collectors and paper makers are facing two main problems. First, they have to travel for several days to get to Lokta forest; and second, collectors or communities around the Lokta forests are increasingly restricting the access of outsiders, including the paper makers of Naglibang, to collect Lokta bark from the forests. Now most of the paper makers feel that their enterprise cannot sustain itself unless they have their own resources. This indicates that enterprises having no linkage with natural resource institution or ownership tend to make over-use of the resource.

Where there is a sense of ownership over resources and an awareness of the scope of benefits from the enterprise, resource user groups have demonstrated an ability and commitment to mitigate major threats to natural resources. One example of this is from Kankai FUG, where Kankai River has washed away a big chunk of the forest area. In the past few years, the river has scoured approximately 50 hectares. In order to control river damage to forestlands, the FUG has employed a huge sum of money and mobilized other resources in creating embankments to save the forestland. The money for this purpose was made possible through the enterprise activities of the FUG.

CBFEs have also assisted in cultivation and artificial regeneration of forest resources. Kankai and Shankamagar FUGs have established and operated nurseries and plantation works. Part of the money earned through enterprise is spent on activities that assist natural regeneration.

From the resource conservation perspective, FUGs have more sense of ownership than co-operatives of producers as in the case of ACPC, who depend on either FUGs or government forest. FUG owned companies such as Malika differ from
shareholding companies like HOPL in their impact on natural resources; the former having greater stakes and concerns over resource management activities. Private producers on leased community land are generally surrounded by a feeling of insecurity over the tenure; yet, if the FUG or related local institution offers clear tenure, the producer has scope to conserve natural resources.

### 3.3.4 Comparative Analysis of Enterprise Modalities

Using ranking scores at three levels (3: best, 2: medium, 1: poor), a comparative analysis of the five enterprise modalities was done using information compiled in the case studies. A summary of the results of the analysis is presented in Table 10.

The main outcome of this analysis is that sole ownership is not necessarily the best modality in the forest enterprise sector. Its main weaknesses in this sector are that organization for all kinds of issues is essential and without that there are many risks.

Companies scored the lowest of the other modalities. This is because there is no institutional mechanism, such as with FUGs, to ensure linkages with support services, environmental management and advocacy with the DFO. On the other hand, companies scored higher than FUG enterprises in the area of marketing because they had better management capacity. In addition, they can provide opportunities for increased participation of women.

Co-operative enterprises also scored less than FUG enterprises because they have no institutional mechanism for advocacy with the DFO or for guaranteeing environmental management. They also scored higher than FUGs on marketing and on participation of women.

FUGs scored less on marketing because of the lack of management capacity for marketing. However, in many other respects, they are at least potentially as strong as the other enterprise modalities.

This tool can be adapted to the particular interest of the users by adding additional weight to various criteria. If marketing capacity is essential for a certain product, then these criteria can be weighted, in which case the advantages of the company modality would become more apparent. This explains why this model was chosen in challenging marketing situations such as with HOPL.

On the other hand, if women’s participation is the most important, and if this ranking is weighted, then the co-operative modality would come out higher than the others.

If conservation of resources is the most important factor, and those criteria are given additional weight, then the FUG enterprises would score the highest.
<table>
<thead>
<tr>
<th>FACTORS</th>
<th>ENTERPRISE MODALITY</th>
<th>Sole enterprises</th>
<th>FUG enterprise</th>
<th>FUG consortium</th>
<th>Co-operative</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>**MARKET: **&lt;br&gt;Price</td>
<td>No bargaining power unless organized into a trade association and even then it's difficult to guarantee agreement on sale price to buyers. (1)</td>
<td>Potential for own financing and therefore for increased bargaining power, but difficult to reach agreement amongst all members on sale price to buyers. (2)</td>
<td>Potential for own financing and therefore for increased bargaining power, but difficult to reach agreement amongst all members on sale price to buyers. (2)</td>
<td>Potential for own financing and therefore for increased bargaining power. Can also achieve agreements amongst members on sale price to buyers. (3)</td>
<td>Potential for own financing and therefore for increased bargaining power and can also easily reach agreement on sale price amongst shareholders. (3)</td>
<td></td>
</tr>
<tr>
<td>Economy of scale</td>
<td>Difficult to achieve (1)</td>
<td>Can be achieved (3)</td>
<td>Can be achieved (3)</td>
<td>Can be achieved (3)</td>
<td>Can be achieved (3)</td>
<td></td>
</tr>
<tr>
<td>Access to transport</td>
<td>Difficult to organize (1)</td>
<td>Easy to organize (3)</td>
<td>Easy to organize (3)</td>
<td>Easy to organize (3)</td>
<td>Easy to organize (3)</td>
<td></td>
</tr>
<tr>
<td>Access to forward linkages and services</td>
<td>Difficult to achieve (1)</td>
<td>Management capacity is lacking to organize this (2)</td>
<td>Management capacity is lacking to organize this (2)</td>
<td>Management capacity is lacking to organize this (2)</td>
<td>Better management capacity to achieve this (3)</td>
<td></td>
</tr>
<tr>
<td><strong>Sub total</strong></td>
<td>(4)</td>
<td>(10)</td>
<td>(10)</td>
<td>(11)</td>
<td>(12)</td>
<td></td>
</tr>
</tbody>
</table>
Table 10 continued ......

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>Sole enterprises</th>
<th>FUG enterprise</th>
<th>FUG consortium</th>
<th>Co-operative</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENVIRONMENT:</strong> Biodiversity</td>
<td>No positive impact can be guaranteed and chances of negative impact are high without peer pressure</td>
<td>Potential for good impact if participation of all users is ensured and conflicts are resolved</td>
<td>More difficult to ensure participation but has potential for good impact</td>
<td>Good impact is only achieved if increased income results in increased awareness of conservation</td>
<td>Good impact is only achieved if increased income results in increased awareness of conservation</td>
</tr>
<tr>
<td>Management and monitoring can easily be organized</td>
<td>Needs good linkage with FUG and can’t be ensured</td>
<td>Can easily be organized</td>
<td>Can easily be organized</td>
<td>Needs good linkage with FUG in order to be possible and can’t be ensured</td>
<td>Needs good linkage with FUG in order to be possible and can’t be ensured</td>
</tr>
<tr>
<td><strong>SOCIAL:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution of income</td>
<td>There is no control over equity</td>
<td>Potential to be equitable if there is transparency and good participation in decision making on FUG funds</td>
<td>Potential to be equitable if there is transparency and good participation in decision making on FUG funds</td>
<td>By - laws guarantee equity and transparency with distribution of dividends, but distribution of work opportunities may not always be equitable</td>
<td>Equity is only ensured through distribution of shares. Influential shareholders can dominate decision making</td>
</tr>
</tbody>
</table>

Sub total | (3) | (6) | (6) | (4) | (4) |

93
Table 10 continued ......

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>Sole enterprises</th>
<th>FUG enterprise</th>
<th>FUG consortium</th>
<th>Co-operative</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation of women</td>
<td>Potential to be very high if it's a women owned enterprise, or an ethnic group in which women are allowed decision making roles</td>
<td>Potential for it to be high only if there is support for participation in decision making in FUG committee</td>
<td>Potential for it to be high only if there is support for participation in decision making in FUG committee</td>
<td>Can be very high in the case of a women’s only coop</td>
<td>Potential to be very high in the case of a women’s only company, but there are no examples in forestry sector (only in handicraft sector)</td>
</tr>
<tr>
<td>Impact of Policy</td>
<td>No advocacy power with DFO</td>
<td>Strong advocacy power and potential support from FECOFUN and (I) NGO</td>
<td>Strong advocacy power and potential support from FECOFUN and (I) NGO</td>
<td>No advocacy power with DFO</td>
<td>No advocacy power with DFO</td>
</tr>
<tr>
<td>Sub total</td>
<td>(5)</td>
<td>(7)</td>
<td>(7)</td>
<td>(7)</td>
<td>(6)</td>
</tr>
<tr>
<td>TECHNOLOGY: Access to value addition</td>
<td>Poor access</td>
<td>Good access</td>
<td>Good access</td>
<td>Good access</td>
<td>Good access</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Very difficult to ensure</td>
<td>Can be ensured with good management</td>
<td>Can be ensured with good management</td>
<td>More difficult to ensure continuing linkages</td>
<td>More difficult to ensure continuing linkages</td>
</tr>
<tr>
<td>Sub total</td>
<td>(2)</td>
<td>(6)</td>
<td>(6)</td>
<td>(5)</td>
<td>(5)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>(15)</td>
<td>(29)</td>
<td>(29)</td>
<td>(27)</td>
<td>(23)</td>
</tr>
</tbody>
</table>
Chapter 4

CONCLUSIONS AND RECOMMENDATION

4.1 Conclusion - Forest Enterprises as Vehicles of Sustainable Development

Community based forestry enterprises (CBFE) have the potential to create economic opportunities at local level and to strengthen resource conservation. CBFE can be triggered by facilitating service delivery in some crucial aspect such as marketing, resource management and technology development. Local groups or individuals have the capacity to learn to manage the various dimensions of enterprise activities. Several modality options allow for emergence in different contexts and for different goals to be focused.

4.1.1 CBFE Modalities

Ownership structure and the nature of the linkages to natural resources are the two principle dimensions of CBFE modalities. There are five ownership types that include sole, FUG, FUG consortium, co-op, and private limited.

These enterprises have specific strengths and weaknesses in generating profits, benefiting poor, and conserving natural resources. While companies and sole enterprises are efficient in creating profits, FUGs and their consortium and cooperatives have scope for creating more favorable equity impacts. All have contributed to the conservation of natural resources though in varying degrees.

All these issues, therefore, have to be assessed as part of the feasibility analysis for a forest enterprise. The enterprise modality, which is chosen, can respond very well to these kinds of issues but needs to be selected judiciously. There is no blue print for designing enterprises. They must be organized in such a way that the entrepreneurs can equally participate and respond to market forces and at the same time have ensured access and control over raw material supply. Co-operatives are by no means the only option nor the best option for partnerships, and this study hopes to have presented other options which are equally viable depending on the situation.

Economies of scale should not always be the determining factor in designing enterprise modalities. Scale can be achieved through several means, other than through large and complex enterprise structures. Several small enterprises can work together in a trade group without having to be one big enterprise and still achieve the same effect.
4.1.2 Factors Leading to Enterprise Success

The eleven CBFE cases suggest that there are certain factors that facilitate or hinder the genesis, operation and growth of enterprises. These include external inputs, marketing outlets, community characteristics, natural resource base, technology, and policy factors. External inputs in terms of awareness raising, technical assistance in resource management and enterprise development and operation, and finally support have determined the fate of enterprises.

Market demand, marketing information, channels and marketing infrastructure together constitute marketing outlets that determine the successful operation of a CBFE. Community characteristics that influence the genesis, operation and growth of a CBFE include leadership, local institutions, entrepreneurship culture, economic objectives of the entrepreneurs, and others.

The natural base is the starting point of forestry enterprise. The type, condition and abundance of the resource also dictate the selection of CBFE and its success. Use of suitable technology adds value to products and help to make the management more efficient. The case studies suggest that if a technology is built on traditional knowledge or expertise and is less sophisticated, the enterprise has a better chance of success.

Policy factors have crucial effects on CBFE success. Implementation, distortion and rapid change in the policy environment has created added risks to enterprises, and in many cases severely impacted on the managerial, financial, economic, and ecological aspects of the enterprise operation.

4.1.3 Enterprise Consequences

Impact on Local Economy

The enterprises studied in this research represented significant levels of income for entrepreneurs, not only as individual income but also in the form of savings in community funds of FUGs. Men and women in the community have obtained employment opportunities as part time or full time in enterprise management, raw material collection, processing, and marketing. Creation of such opportunities at the local level have indicated a potential to reduce regional imbalances.

Impact on Social Equity

Community based forestry enterprises have primarily benefited collectors and FUG members, who include the poor, the disadvantaged and women. Depending on the institutional context that the enterprise is bestowed with, the poor and women have been involved and benefited from the enterprise significantly. Emergence and growth of CBFE sometimes bypasses local traders who may be affected adversely, but they still have an opportunity to be part of the enterprise itself to safeguard their interests.
Conclusions and Recommendation

Impact on Natural Resource

The study indicates that as a result of enterprise activities, natural resource conservation can be enhanced in various ways. As entrepreneurs became more aware of the scope of natural resources in their livelihoods and developed deeper sense of ownership, they have improved resource management plans, institutionalized more sustainable harvesting practices and paid for the resource conservation activities, initiated measures to mitigate threats to natural resources, assisted natural regeneration and conducted artificial regeneration of the plant resources. This concludes that if proper institutional mechanisms exist, increased commercial use of forest and pasture resources will contribute to conservation rather than depletion of natural resources.

4.2 Recommendations

Community based forestry enterprises have scope for local economic development, harnessing social equity, and conserving natural resources. But this involves tremendous active efforts on the part of government, supporting agencies, and entrepreneur communities, and this will actually determine the genesis of the enterprises and impact they have. Based on this, general as well as specific recommendations are made:

1. Provide services in resource management, marketing, financing and technological development

Since external inputs in institutional, technical, financial and marketing services have been the crucial determinants of the enterprise emergence and success, integrated delivery of such services through suitable organizations is recommended. While at the beginning such services may be subsidized, gradually these services should be delivered through private or NGO sectors on a cost recovery basis. Programs that aim to support and facilitate forestry enterprises as a means to poverty alleviation and natural resource conservation may take multi-pronged strategies to address several issues critical to the success of the enterprises.

a. Market

Use market driven strategies to select products before designing enterprise modalities and activities. Try to achieve economies of scale but without complex management structures.

Provide forward linkages with buyers and capacity building for entrepreneurs and encourage to provide buyers financing, but also make sure the entrepreneurs have increased bargaining power.

b. Economic

Identify stakeholders before designing the enterprise and try to diversify with several products in order to provide equitable distribution of benefits in one programme.
Conclusions and Recommendation

Appraise a business from a perspective of financial return as well as according to environmental, social, and technological sustainability.

c. Resource

Find ways to increase participation in the decision making on management of natural resources.

The type and extent of services required by community based enterprises are many, and the Government machinery alone is not in a position to deliver such services. Intermediaries that may include I/NGOs and the private sector should also be encouraged (through funding, regulations etc.), to render needed business development services to community groups.

The case studies showed that the type of product makes a big difference. Products with existing markets, such as NTFP, may only need capacity building and linkages and the entrepreneurs will then be able to form their own linkages with buyers. Products with new markets are much more difficult and require long term support, even as long as 10-15 years.

Timber based products with existing markets require relatively simple technology but a lot of management capacity building and advocacy support. Even FUG which have a predominance of timber products, have other products which certain members may prefer to develop for their income, and diversification may then be the best strategy as was well demonstrated in the case studies.

2. Create and facilitate the development of national level marketing enterprises to provide fair and equitable forward links to community based enterprises

The ultimate buyers of most of the natural products are mainly outside the country. Tracking consumer preferences around the world and designing and launching products to capture the willingness of distant customers is not always possible within the capacity of community-based enterprises. Instead, if national level marketing enterprises provide a fair linkage to community based producers, this will ensure backward linkages and economic opportunities for them. Nepal Paper Products Company that adds value to Nepali paper and markets internally, for example, has been able to offer better prices than otherwise to Malika Handmade Company of Bajhang. If emergence and operation of such companies at national level is expedited by suitable policy and regulatory environment in various timber and non-timber forest products, this will expand the business scope of communities as well.

3. Assign CBFE as a priority sector in investment, export concessions, etc., to enhance the externalities of the green sector enterprises and make regulatory provisions more responsive to the needs and constraints of the enterprise operators

Community based enterprises have a scope for positive impact on economy, ecology, and society. But this sector is constrained by lack of a conducive
Conclusions and Recommendation

regulatory framework. They need to be revised to facilitate delivery of required services as well as relax unnecessary controls in collection, trade, and export.

4. Recommendations Specific to Modalities

Making provisions for loans, market information, and facilitating access to raw materials from community forests can enhance success of sole enterprises. FUG enterprises, likewise, need technical support in financial planning and accounting, forest management, analyzing policy environment and devising strategies for coping with policy threats, and also extensive support in empowering women and disadvantaged in the enterprise processes. FUG consortium enterprises share similar issues as FUG, and of course, the scale of support needed may be even higher in view of the increased complexity of the issues. Co-operative enterprises also need financial assistance, marketing services, institutional development supports. Community based companies need specialized marketing services, product development technology, and financial support.

5. Recommendations Specific to Product Lines

Major product specific intervention modes include: essential oils (market information, export regulations, timber (transport infrastructure, certification, and social marketing), fodder and grasses (silvicultural systems development within community forestry, training and demonstration to FUG), fuel wood (regulation of yield from community forests, marketing regulations), Lokta fibers (resource assessment, sustainable harvesting, marketing information, private vs. community owned enterprises).
References


References

### Annex 1. List of Forest Enterprises Identified for Sampling.

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Product line</th>
<th>Product type</th>
<th>Enterprise name</th>
<th>District</th>
<th>Elevation</th>
<th>Zone</th>
<th>Involvement of disadvantaged group</th>
<th>Source of RM</th>
<th>Source of RM_area</th>
<th>Ownership</th>
<th>Technology</th>
<th>Seasonality</th>
<th>T-market</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Timber</td>
<td>Logs/Poles</td>
<td>Kankai FUG</td>
<td>Jhapa</td>
<td>Terai</td>
<td>East</td>
<td>CP</td>
<td>FUG</td>
<td>TRAD</td>
<td>CP</td>
<td>LONG</td>
<td>L,D,N</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Timber</td>
<td>Sawn Timber</td>
<td>Chaubas Enterprise</td>
<td>Kavre</td>
<td>hills</td>
<td>East</td>
<td>CP</td>
<td>COOP of FUG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Timber</td>
<td>Sawn timber</td>
<td>Baghmare FUG</td>
<td>Dang</td>
<td>Terai</td>
<td>West</td>
<td>CP</td>
<td>FUG</td>
<td>INTERMED</td>
<td></td>
<td>L,N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>MAPs/nat habitat</td>
<td>Lyco podium</td>
<td>Saurya Pakho FUG</td>
<td>Baglung</td>
<td>hills</td>
<td>Centre</td>
<td>Yes</td>
<td>CP/NF</td>
<td>FUG</td>
<td>TRAD</td>
<td>MED</td>
<td>D,N</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Fuelwood</td>
<td>Fuelwood</td>
<td>Shankamagar FUG</td>
<td>Rupandehi</td>
<td>Terai</td>
<td>Centre</td>
<td>CP</td>
<td>FUG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Fuelwood</td>
<td>Charcoal</td>
<td>Kavrepalan-chowk</td>
<td></td>
<td>hills</td>
<td>East</td>
<td>Yes</td>
<td>CP/NF</td>
<td>SOLE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Fodder/Grasses</td>
<td>Fodder</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Fodder/Grasses</td>
<td>Amriso</td>
<td>Ilam</td>
<td></td>
<td>hills</td>
<td>East</td>
<td>CP/P</td>
<td>SOLE/FUG</td>
<td>TRAD</td>
<td>MED</td>
<td>D,N,I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Fodder/Grasses</td>
<td>Amriso</td>
<td>Makawanpur</td>
<td></td>
<td>hills</td>
<td>Centre</td>
<td>CP</td>
<td>Leasehold Group</td>
<td>TRAD</td>
<td>MED</td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Fibers</td>
<td>Allo</td>
<td>Shankhu-wasabha</td>
<td></td>
<td>hills</td>
<td>East</td>
<td>CP</td>
<td>COOP</td>
<td></td>
<td></td>
<td></td>
<td>N,I</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Paper</td>
<td>Lokta</td>
<td>Baglung</td>
<td></td>
<td>hills</td>
<td>Centre</td>
<td>Yes</td>
<td>Baglung</td>
<td>SOLE</td>
<td>TRAD</td>
<td>MED</td>
<td>N,I</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Food/Spices</td>
<td>Cardamom</td>
<td>Ilam</td>
<td></td>
<td>hills</td>
<td>East</td>
<td>CP/P</td>
<td>SOLE/FUG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. N.</td>
<td>Product line</td>
<td>Product type</td>
<td>Enterprise name</td>
<td>District</td>
<td>Elevation</td>
<td>Zone</td>
<td>Involvement of disadvantaged group</td>
<td>Source of RM</td>
<td>Source of RM_area</td>
<td>Ownership</td>
<td>Technology</td>
<td>Seasonality</td>
<td>T-market</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>---------</td>
<td>-----------</td>
<td>------</td>
<td>-----------------------------------</td>
<td>-------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>------------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>14</td>
<td>Fibers</td>
<td>Hemp</td>
<td>Kathmandu hills</td>
<td>East</td>
<td>Yes</td>
<td>CP</td>
<td>Rolpa</td>
<td>TRAD</td>
<td>LONG</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Resin/Oil</td>
<td>Pine resin</td>
<td>Dumresanne FUG</td>
<td>Dhankuta</td>
<td>hills</td>
<td>East</td>
<td>Yes</td>
<td>CP</td>
<td>FUG</td>
<td>Imp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Leaf products</td>
<td>Sal</td>
<td>Shankhu- wasaba</td>
<td>Hills</td>
<td>East</td>
<td>Yes</td>
<td>Sal association</td>
<td>SOLE/FUG</td>
<td>SHORT</td>
<td>D,N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Bamboo and Rattan</td>
<td>Sal</td>
<td>Shankhu- wasaba</td>
<td>Hills</td>
<td>East</td>
<td>Yes</td>
<td>CP</td>
<td>SOLE/FUG</td>
<td>SHORT</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>MAPs/cultivated</td>
<td>Taxus</td>
<td>Humla Oil Pvt. Ltd.</td>
<td>Humla mountains</td>
<td>West</td>
<td>Yes</td>
<td>CP/NF</td>
<td>Humla Corporation/FUG</td>
<td>MOD</td>
<td>LONG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>MAPs/nat habitat</td>
<td>Taxus</td>
<td>Humla Oil Pvt. Ltd.</td>
<td>Humla mountains</td>
<td>West</td>
<td>Yes</td>
<td>CP/NF</td>
<td>Humla Corporation/FUG</td>
<td>MOD</td>
<td>LONG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>MAPs/nat habitat</td>
<td>Taxus</td>
<td>Humla Oil Pvt. Ltd.</td>
<td>Humla mountains</td>
<td>West</td>
<td>Yes</td>
<td>CP/NF</td>
<td>Humla Corporation/FUG</td>
<td>MOD</td>
<td>LONG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Leaf products</td>
<td>Pipal</td>
<td>Jhapa</td>
<td>Mountains</td>
<td>West</td>
<td>Yes</td>
<td>NF</td>
<td>SOLE</td>
<td>L,I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Timber</td>
<td>Logs/Poles</td>
<td>Kankai FUG</td>
<td>Jhapa</td>
<td>Mountains</td>
<td>West</td>
<td>NF</td>
<td>SOLE</td>
<td>L,I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Timber</td>
<td>Furniture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Timber</td>
<td>Woodcarvings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Timber</td>
<td>Theki/Madani</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Fuelwood</td>
<td>Charcoal</td>
<td>Kathmandu</td>
<td>Dashinkali</td>
<td>Hills</td>
<td>Yes</td>
<td>D,N</td>
<td>Dabur</td>
<td>Dabur</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Fibers</td>
<td>Hemp</td>
<td>Bajura</td>
<td>Hills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Fibers</td>
<td>Babio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Fibers</td>
<td>Odal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Annex 1 continued ...

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Product line</th>
<th>Product type</th>
<th>Enterprise name</th>
<th>District</th>
<th>Elevation</th>
<th>Zone</th>
<th>Involvement of disadvantaged group</th>
<th>Source of RM</th>
<th>Source of RM_area</th>
<th>Ownership</th>
<th>Technology</th>
<th>Seasonality</th>
<th>T-market</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Fibers</td>
<td>Agave</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Paper</td>
<td>Argeli</td>
<td>Gok-FUG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Paper</td>
<td>Argeli</td>
<td>Shankhuwa-sabha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Paper</td>
<td>Argeli</td>
<td>Kavre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Paper</td>
<td>Lokta</td>
<td>Ramechhap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Lokta</td>
<td></td>
<td>Dolakha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>Lokta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>paper products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>Food/Spices</td>
<td>Tejpat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Mushrooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Asparagus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Soaps</td>
<td>Ritha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>MAPs/nat habitat</td>
<td>essential oils</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>MAPs/cultivated</td>
<td>essential oils</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Pine resin</td>
<td></td>
<td>Baitadi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Incense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>Bhorla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Bamboo and Rattan</td>
<td>local utensils</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Natural dyes</td>
<td>Berberis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. N.</td>
<td>Product line</td>
<td>Product type</td>
<td>Enterprise name</td>
<td>District</td>
<td>Elevation</td>
<td>Zone</td>
<td>Involvement of disadvantaged group</td>
<td>Source of RM</td>
<td>Source of RM_area</td>
<td>Ownership</td>
<td>Technology</td>
<td>Seasonality</td>
<td>T-market</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>----------</td>
<td>-----------</td>
<td>------</td>
<td>-----------------------------------</td>
<td>--------------</td>
<td>------------------</td>
<td>-----------</td>
<td>------------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>50</td>
<td>Rubia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>Rheum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Medicines</td>
<td>Ayurvedic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Traditional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Animal products</td>
<td>Honey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Laha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>Fibers</td>
<td>Hemp</td>
<td>Everest Fashion</td>
<td>Lalitpur</td>
<td>hills</td>
<td>East</td>
<td>Yes</td>
<td>CP</td>
<td></td>
<td>SOLE</td>
<td>INTERMED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>Fibers</td>
<td>Allo</td>
<td>Everest Fashion</td>
<td>Lalitpur</td>
<td>hills</td>
<td>East</td>
<td>Yes</td>
<td>CP</td>
<td></td>
<td>SOLE</td>
<td>INTERMED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>Resin/Oil</td>
<td>Chiuri</td>
<td>Rukum</td>
<td>Rukum</td>
<td>hills</td>
<td>West</td>
<td></td>
<td></td>
<td></td>
<td>SOLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>Timber</td>
<td>Fodder</td>
<td>Bajhang</td>
<td>Bajhang</td>
<td>hills</td>
<td>West</td>
<td></td>
<td></td>
<td></td>
<td>SOLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Incense</td>
<td>Incense</td>
<td>Bajhang</td>
<td>Bajhang</td>
<td>hills</td>
<td>West</td>
<td></td>
<td></td>
<td></td>
<td>SOLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>Food/Spices</td>
<td>Tejpat</td>
<td>Palpa</td>
<td>Palpa</td>
<td></td>
<td>West</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>Food/Spices</td>
<td>Amriso</td>
<td>Dhankuta</td>
<td>Dhankuta</td>
<td>hills</td>
<td>East</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>Food/Spices</td>
<td>Amriso</td>
<td>Ilam</td>
<td>Ilam</td>
<td>hills</td>
<td>East</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>Timber</td>
<td>Nurseries</td>
<td>Dhankuta</td>
<td>Dhankuta</td>
<td>hills</td>
<td>East</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>MAPs/nat habitat</td>
<td>Raw Trade</td>
<td>Village Traders</td>
<td>Humla</td>
<td>mountains</td>
<td>West</td>
<td>Yes</td>
<td>CP/INF</td>
<td></td>
<td>SOLE</td>
<td>TRAD</td>
<td>SHORT</td>
<td>N</td>
</tr>
</tbody>
</table>

* is potential enterprise of study.
### Annex 2. List of Plants with Their Common and Scientific Names and Some Useful Information

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
<th>Part used</th>
<th>Summary of information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broom grass (Amriso Kucho)</td>
<td><em>Thysanolaena maxima</em></td>
<td>inflorescens,</td>
<td>It is native perennial grass and grows at 300 to 2000m. Green leaves and tenderparts fed to livestock, hard parts used forfencing and fuel. A good income source for in Eastern part of Nepal.</td>
</tr>
<tr>
<td>Chirpine (Khote Salla)</td>
<td><em>Pinus roxburghii</em></td>
<td>seed, resin</td>
<td>An evergreen tree, found in tropical and sub-tropical region. Resin tapping from timber, extract rosin &amp; terpentine from Resin which is used medicine &amp; dyeing materials.</td>
</tr>
<tr>
<td>Eucalyptus (Masala)</td>
<td><em>Eucalyptus spp.</em></td>
<td>leaf</td>
<td>Found in tropical &amp; sub-tropical zone. Oil is extracted from leaves which is used medicinal purpose.</td>
</tr>
<tr>
<td>Ginger (Aduwa)</td>
<td><em>Zingiber officinale</em></td>
<td>rhizome</td>
<td>A herb about 1m.hi. it grows up to 1500m. and uses for spices of medicinal purpose. (stimulant, carminative)</td>
</tr>
<tr>
<td>Hemp (Bhang)</td>
<td><em>Cannabis sativa</em></td>
<td>fruits, barks</td>
<td>Erect herb upto 2 m. tall. Ocuurs as a weed and is cultivated. Fibre used for making traditional clothes. Banned for raw export.</td>
</tr>
<tr>
<td>Himalayan nettle (Allo)</td>
<td><em>Girardina palmata</em></td>
<td>bark</td>
<td>A thorny herb up to 3 m., it is available from 900 to 2500m. Fibre from bark is used for cloth making. Allo thread can be sold in Kathmandu for NRs. 350/kg.</td>
</tr>
<tr>
<td>Ipili (Allo)</td>
<td><em>Leucaena leucocephala</em></td>
<td>fuel fodder</td>
<td>Exotic spp. that is found tropical zone. It is used for fodder. It is called mother (nurse) tree helps in nitrogen fixation.</td>
</tr>
<tr>
<td>Indian Valeriana (Sugarndhawal)</td>
<td><em>Valeriana jatamansi</em></td>
<td>rhizome/whole</td>
<td>It is perennial rhizomatous herb found in temperate Himalayas between 1600 to 3300m. under the moist places. It's whole part is used for medicinal purpose on essential oil.</td>
</tr>
<tr>
<td>(Kafal)</td>
<td><em>Myrica esculenta</em></td>
<td>fruit &amp; bark</td>
<td>An evergreen tree found upto 2100 m. Bark is used for astrigent, carminative fever, cough &amp; cholera. Fruits are used for food.</td>
</tr>
<tr>
<td>Kutch tree (Khair)</td>
<td><em>Acacia catechu</em></td>
<td>timber, cutch,</td>
<td>A riverine tree grows up to 900 m. Heart wood is used to extract katha &amp; cutch. These items use for medicine purpose.</td>
</tr>
<tr>
<td>(Lali Gurans)</td>
<td><em>Rhododendron arboreum</em></td>
<td>flower, seed</td>
<td>An evergreen tree found around 9 m. tall. This is found between 1500-3400 m. on Southern slope. This is a national flower &amp; powder from seed &amp; flower is used for medicinal purpose.</td>
</tr>
<tr>
<td>Large Cardmum (Elainchi)</td>
<td><em>Amomum subulatum/ A. dealbatum</em></td>
<td>fruit</td>
<td>Large (false) Cardamom/Wild Cardamom. can be cultivated marginal and moist area from 500 m. to 1800 m. medician plant &amp; used for flavoring. Road head price (1997) NRs. 300/kg for dried fruit.</td>
</tr>
<tr>
<td>Lichen (Jhyau)</td>
<td><em>Parmecia nepalensis</em></td>
<td>plant, thallus</td>
<td>Mossy plants from tropical to sub-alpine region. It is an association of alga &amp; fungus and banned for crude export.</td>
</tr>
<tr>
<td>(Lokta)</td>
<td><em>Daphne bholua, D. papyracea</em></td>
<td>bark</td>
<td>It is a shrub upto 6 m. tall and found temperate region at an elevation from 1800 to 3600m. Fiber is used for paper making in various parts of Nepal.</td>
</tr>
<tr>
<td>(Pirhe Ghas, Soti)</td>
<td><em>Cymbopogan jwarancusa</em></td>
<td>stem, leaves</td>
<td>Perennial aromatic grass found in 1600 to 3000m. in open slopes aromatic oil is used for perfumery purpose.</td>
</tr>
<tr>
<td>Common name</td>
<td>Scientific name</td>
<td>Part used</td>
<td>Summary of information</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------</td>
<td>---------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Rockfoil (Pakhanbed)</td>
<td>Berginia citiata</td>
<td>rhizomes/root</td>
<td>It is a perennial herb grows well in moist and shaddy places. It is found from 1300-3600m. Root stock is used for medicinal purpose.</td>
</tr>
<tr>
<td>(Sissoo)</td>
<td>Dalbergia sissoo</td>
<td>timber</td>
<td>It is found in alluvial plains and foot hills of Siwaliks along the river bank.</td>
</tr>
<tr>
<td>Spikenard (Jatamansi, Bhutle)</td>
<td>Nardostachys grandiflora</td>
<td>rhizome</td>
<td>Perennial herb in alpine and sub-alpine zones. Rhizome and root are collected and have medicinal, aromatic and cosmetic uses. Vulnerable species included in CITES Annex 2 list.</td>
</tr>
<tr>
<td>Sweet flag (Bojho)</td>
<td>Acorus calamus</td>
<td>rhizome</td>
<td>Perennial semi aquatic herbaceous plant, 1m. tall. Roots and rhizomes traded. Can be made into calamus oil which is in trade. Natural pesticide for storing grain.</td>
</tr>
<tr>
<td>Zanthoxylum (Timur)</td>
<td>Zanthoxylum armatum</td>
<td>fruit</td>
<td>It is small around 3 m. tall shrub found in temprate region upto 1700 m. It's fruit is used for extracting essential oil.</td>
</tr>
</tbody>
</table>
Annex 3. Check List of Information to Gather on Each Enterprise for a Foundation Case Study

General Description
General statement describing the area in which the enterprise exists. The product(s) sold, its traditional uses, the season when it is available, the activities needed for collecting the product. The source of the raw materials. The activities of the enterprise or of the enterprise male and female participants (collection, drying, grading, processing, packaging) and the roles of the enterprise to support these activities.

Economy and Marketing
The buyers of the product(s), their location in relationship to the enterprise, and their relationship with the enterprise and the end users of the product. The number of years since the enterprise was established. The registration status of the enterprise. The organization, management and decision making structure, male and female staff composition and representatives from other organizations or institutions. The bank account holders. The mechanisms for payment for raw material and for distribution of profits. The existing forward linkages for price information and with other marketing agents or organizations. The relative importance of cash income for participants which comes from this product compared to other sources. The relative importance of the workload for this product compared to the other activities in the village.

Financial
The volume and value of product purchased and sold every year or season. The type of equipment and its value which is owned by the enterprise or by the participants. The types of start up capital needed, the sources of start up finance, the annual interest rate paid on loans. The number of years in which the start up loan was repaid. The growth stage of the enterprise. The gross profit margin on a profit. The profit trends and current status of assets versus liabilities.
Resources
The status of the resource.
The resource management strategy and the relationship with existing traditional
management systems or with the FUG.

Legal and Fiscal Issues
The legal status of the product and permits, which the enterprise obtains for
trading with the products.
The taxes paid and to which government institution.

Institutional Issues
The types of male and female owners of the enterprise and their total number
(caste, wealth status, etc.).
The number of total male and female beneficiaries from the enterprise (owners
and other collectors).
The relationship with other local community based organizations.
The partners or supporting organization(s) and their roles in supporting the
enterprise.

Technology
The type of technology which is used, power and resource needs and skill levels
required.

General Issues
The training which was received by enterprise participants and the institutions
delivering the training.
The features about this enterprise which make it unique or interesting.
The positive (or negative) impacts which the enterprise has had on the community.
The problems and risks which the enterprise has had to overcome or which it is
facing at the moment and the proposed solutions.
The opportunities for the enterprise in the future and the strategies needed to
exploit them.
The role that additional investment loan financing could have for the enterprise
and the likely return.