DEPARTMENT FOR INTERNATIONAL DEVELOPMENT

STRATEGY FOR RESEARCH ON RENEWABLE NATURAL RESOURCES

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FINAL TECHNICAL REPORT

DFID Project Number

R7889

Project title

Dissemination of Research Findings regarding Community Forestry in Nepal

Project Leader

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Organisation

Department of Geography, University of Leeds

NRSP Production System

FAI

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1. Executive Summary

R7889 has its purpose as focussed dissemination of summarised findings of R.6778, in the format of a set of 5 booklets posted to over 3000 participatory forestry professionals worldwide, via the ODI Rural Development Forestry Network newsletter.

These network members represent the key international participatory forestry audience, and through circulating policy implications for the R6778 it is hoped that progressive policy changes which can improve the livelihoods of the poor will be promoted.

There has been a delay in the completion of the RDFN papers. These are now complete and being prepared for publication, and circulation which is anticipated to happen in early March 2002.

2. Background

The NRSP project, R6778 (Community forestry in Nepal: sustainability and impacts on common and private resources), that was completed in December 1999, sought to deliver an improved understanding of common property issues and tenure rights and to incorporate this into land use management and planning strategies.

The project provided analysis of impacts of community forestry policy implementation on the forest resource, the local forest management institution and on the livelihoods of forest users.

A Participatory Action Research methodology was developed to assist communities to assess the implications and outcomes of community forestry and a micro action planning process was set in place to assist forest user groups (FUGs) to identify their weaknesses and take appropriate action, drawing upon outside support where necessary. An analysis was drawn up of the implications of community forestry for farming systems. Key indicators to assess the development of the community forestry process were identified and the capacities of different stakeholders in the implementation of community forestry policies were enhanced.

Following on from the dissemination activities of R6778 (Workshops held in Kathmandu and circulation of project reports), this project aims to achieve a wider circulation of the findings of R6778, through the ODI Rural Forestry Development Newsletter.

Demand for the project was based on a recognition of the success of the R6778 study of community forestry in Nepal, and recognition of the value of wider dissemination of the findings.

3. Project Purpose

This project is a follow up to R6778. The project's development objectives are to achieve maximum policy impact of the research findings of R6778 through focused international dissemination with the purpose of informing and possibly

influencing the actions of policy-makers.

The science objective is make knowledge available through an influential communication channel – the Rural Development Forestry Network (RDFN). This network has 3000 subscribers internationally, representing the key international audience for participatory forest management

This project has sought to ensure the findings of R6778 reach the widest possible relevant audience, in order that awareness of policy implications of the Community Forest processes in Nepal can be raised. Through raised awareness amongst policy makers, it is hoped that the research can impact policy in a way which will benefit poor people living at the forest agriculture interface.

This focussed dissemination will ensure the findings from R.6778 inform the actions of policy-makers working on the forest-agriculture interface in Nepal and internationally

From R.6778 logframe:
Purpose addressed: 'new or improved resource management strategy accepted by community and planning authorities'
Activity reference: 5.5 'Articles in … RDFN …'
.. To achieve maximum policy impact of R6778 research findings through focussed international dissemination

4. Research Activities

As the papers are based on research project R6778 the reader is referred to the technical report of that project.

5. Outputs

5 papers have been produced, on the basis of the finding of R6778, and are listed below.

The production of the papers has been delayed for two reasons. Firstly there have been unforeseen communications difficulties with partners and co-authors in Nepal, caused by civil unrest and related damage to infrastructure. Secondly the project leader sustained incapacitating injuries due to a car crash in the Summer of 2001,which took a number of months to recover form.

The papers have now been completed.

The following papers will be published and distributed by ODI in March 2002:

Springate-Baginski, Oliver, Om Prakash Dev, Nagendra Yadav, John Soussan (in press) Community Forest Management in the Middle-Hills of Nepal: The Changing Context of the Forest –Agriculture Interface

Springate-Baginski, Oliver, Om Prakash Dev, Nagendra Yadav, John Soussan (in press) Institutional Development of Forest User Groups in Nepal: Processes and Indicators

Springate-Baginski, Oliver, Om Prakash Dev, Nagendra Yadav, John Soussan (in press) Household Livelihoods in the Middle Hills of Nepal: The Impacts of Community Forestry

Springate-Baginski, Oliver, Om Prakash Dev, Nagendra Yadav, John Soussan (in press) Hamlet-Based Micro-Action-Planning: A Tool for Improving Forest User Group's Decision-making and Forest Management

Springate-Baginski, Oliver, Om Prakash Dev, Nagendra Yadav, John Soussan (in press) Entrepreneurial Development of Forest User Groups in Nepal: Fund Generation, Management and Use

An additional output has been an ODI Natural Resource Perspectives paper, written in conjunction with David Brown, Kate Schreckenberg and Yam Malla, to compare the findings from our study to experiences in Cameroon. It is entitled: *' From Supervising Subjects to Supporting Citizens: Recent Developments in Community Forestry in Asia and Africa'*

6. Contribution of Outputs

The findings from R6778 indicate particular policy opportunities to improve the livelihood impact of participatory forestry policies; specifically:

1. Improved local planning tools
2. re-orientation of support services according to local demands for support needs
3. The economic development of FUGs.

The RDFN series of papers highlights these policy opportunities, and gives specific policy tools to achieve these. It is hoped that through raising the awareness of these opportunities, they will be at least partly incorporated, perhaps on a gradual basis, into forest management policies internationally.

7. Publications

Communication materials:

2/2. Pending publication (in press)

Community Forest Management in the Middle-Hills of Nepal: The Changing Context of the Forest –Agriculture Interface

Institutional Development of Forest User Groups in Nepal: Processes and Indicators

Household Livelihoods in the Middle Hills of Nepal: The Impacts of Community Forestry

Hamlet-Based Micro-Action-Planning: A Tool for Improving Forest User Group's Decision-making and Forest Management

Entrepreneurial Development of Forest User Groups in Nepal: Fund Generation, Management and Use

8. Project Logframe

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9. Keywords

Key words (maximum of 10, excluding production system) for entry in the NRSP library accession entry for the project's FTR.

Community Forestry Nepal Forest Agriculture Interface Institution process

10. Annexes

Annex A

Springate-Baginski, O., Dev, O P., Yadav, N P., Soussan, J. 2002. Community Forest Management in the Middle-Hills of Nepal: The Changing Context of the Forest-Agriculture Interface: *University of Leeds / NUKCFP*

Annex B

Springate-Baginski, O., Dev, O P., Yadav, N P., Soussan, J. 2002. Institutional Development of Forest User Groups in Nepal: Processes and Indicators: *University of Leeds / NUKCFP*

Annex C

Springate-Baginski, O., Dev, O P., Yadav, N P., Soussan, J. 2002. Household Livelihoods in the Mid-Hills of Nepal: The Impacts of Community Forestry: *University of Leeds / NUKCFP*

Annex D

Springate-Baginski, O., Dev, O P., Yadav, N P., Soussan, J. 2002. Hamlet-Based Micro-Action Planning: A Tool for Improving Forest User Group's Decision-Making and Forest Management: *University of Leeds / NUKCFP*

Annex E

Springate-Baginski, O., Dev, O P., Yadav, N P., Soussan, J. 2002. Entrepreneurial Development pf Forest User Groups in Nepal: Fund Generation, Management and Use: *University of Leeds / NUKCFP*

Community Forest Management in the Middle-hills of Nepal: The Changing Context of the Forest-Agriculture Interface

Oliver Springate-Baginski, OP Dev, NP Yadav, John Soussan

Acronyms

BJP	Bhojpur District
NUKCFP	Nepal UK Community Forestry Project
CF	Community Forestry
DFO	District Forest Office
DHK	Dhankuta District
DOF	Department of Forests (His Majesty's Government of Nepal)
FECOFUN	Federation of Community Forestry Users of Nepal
FUG	Forest User Group
FUGC	Forest User Group Committee
HMGN	His Majesty's Government of Nepal
IGA	Income Generation Activities
PMUML	Communist Party, United Marxist Leninist
RP	Range Post (local Department of Forest office)
SSB	Sankhuwasabha District
TTM	Terhathum District
VDC	Village Development Committee

About the Project:
'Community Forestry in Nepal: Sustainability and Impacts on Common and Private Property Resource Management' **University of Leeds / NUKCFP Collaborative Research Programme**
This paper presents findings from a 3 year research project, funded by DFID through its Natural Resources Systems Programme, and was undertaken by University of Leeds Environment Centre in Collaboration with Nepal UK Community Forestry Project, and NRI.
It investigated the fundamental processes involved in Community Forestry: FUG institutional development at the local level, their impacts on the forest resource, and on farming systems and livelihoods.
The research project ran over 3 years between 1997-2000. The project used a Participatory Action Research methodology, across 11 Forest User Groups (or FUGs), and 3 non FUGs, in 4 hill districts of the Koshi Hills Zone in Eastern Nepal. This involved group level discussions, participatory resource assessments, household interviews, and discussions with a variety of stakeholders at different levels.

Map 1: Study Area and Sites

The study sites were chosen to reflect the great diversity of physical and social and institutional conditions. Throughout this paper case study reference is made to these 11 FUGs, which are as follows:

14 sites were selected for study, involving 11 FUGs and 3 non-FUG sites for comparability, to reflect a variety of different characteristics: district, accessibility, forest area and type, forest condition, number of users, and age. These are shown in the following chart:

Table 1: Characteristics of Study Sites.

Site No.	Site Name	Dist-rict	Accessibility	Forest Area (Ha)	Forest Type				Forest Condition	Number of House-holds	Forest area / Household (Ha)	Year of FUG formation
					Pine	Katus-Chilaune	Sal	Other				
1	**Bhaludhunga**	DHK	Accessible	23.0	-	K-C	-	-	Fair	105	0.22	'96
2	**Jalkini Katlar**	DHK	Medium	213.5	pine		Sal	-	Poor	119	1.79	'93
3	**Patle Sanne**	DHK	Accessible	147.1	pine	K-C	-	Utis	Good	287	0.51	'94
4	**Chimsuwa (non FUG)**	DHK	Medium	-		-	Sal	Hade, Dangero	Poor	*64	-	'98-'99
5	**Ramche Sunkhani**	SSB	Accessible	129.1	-	-	Sal	-	Good	132	0.98	'92
6	**Dharma Devi**	SSB	Medium	10.0	-	K-C	-	-	Fair	53	0.19	'91
7	**Sibhuwa Salghari**	SSB	Remote	107.6	-	K-C	Sal	Utis	Good	117	0.92	'93
8	**Heluwa Besi (non FUG)**	SSB	Remote	-	-	K-C	Sal	-	Poor	*65	-	'98-'99
9	**Ahale**	BJP	Accessible	24.0	-	K-C	-	Utis	Good	69	0.35	'90
10	**Paluwa Pikhuwa**	BJP	Medium	104.9	pine	-	Sal		Good	121	0.87	'93
11	**Nakla Daskhate**	BJP	Remote	34.5	-	K-C	-		Poor	140	0.25	'95
12	**Nepale Danda (non FUG)**	BJP	Remote	-	-	-	Sal	-	Poor	*125	-	'98-'99
13	**Bokre Danda**	TTM	Accessible	31.0	-	K-C	-	Alnus	Good	188	0.16	'89
14	**Helebung**	TTM	Remote	31.5	-	K-C	-	Alnus	Fair	151	0.21	'93
	Mean:			77.9						135	0.58	

**Note: Estimated number of households for non-FUGs*

Accessibility was classed according to whether FUGs were less than 1 hour from District HQs (accessible), between 1-2 hours (medium), or more than 2 hours (remote) – a conventional approach in the Mid-hills.
Forest condition assessment was reached by both research team and forest users, according to density of stands, forest product availability and level of regeneration.

The method used was a 3 yr – action research approach incorporating biometric and participatory resource assessment

Summary

Community Forestry in the middle hills of Nepal has been *the* paradigmatic example internationally of successful participatory forest management over the last decade. This paper looks at the progress of the policy, and locates it in local and international context. It is based on the findings of a three-year collaborative research project between University of Leeds, UK and the Nepal UK Community Forestry Project.

This paper looks at the evidence for the success of Community Forestry – in terms of impacts on the forest, and places this in its local, national and international context.

The innovative Community Forestry policy has now been widely implemented in the mid-hills. Over 11,000 FUGs have been formed to date, the rate of formation proceeding at around 1,000 per year. This flourishing of people-centred community forestry, facilitated by the enabling policy environment, international donor support, and conscientious efforts of field staff, has transformed local forest management and use. Evidence shows this has led to rapid improvements in forest condition and productivity in most areas.

On close examination Forest User Groups (or FUGs) in the middle hills exhibit extreme variation in their social composition, forest resource condition and institutional development. Despite many challenges to their development most are diligently protecting their forests and regulating product extraction. A small but increasing proportion are actively engaging in 'barefoot silviculture' practices like selective thinning and planting.

Our findings show that forest resources are generally improving, in terms of number and age distribution of plants. Previous trends of forest degradation have been effectively reversed, through the spread of a sense of ownership of the forest amongst local people and consequent effective protection and regulated product extraction.

Forest management by FUGs is however generally below its potential. Active forest management has only developed amongst some FUGs, where there are very effective block-wise rotational management operations, involving planting, grass growing, and tending / thinning of tree-stands. This often occurs in the smaller, ethnically homogeneous groups with high dependency on small forests. In most FUGs there are ongoing attempts at management activities such as planting, thinning, pruning, cleaning etc. but so far this tends to be ad-hoc and intermittent, rather than according to considered time-bound plans. The main problem here is lack of experience and technical understanding amongst local FUG members, and only intermittent support from Range-Post staff. There is the associated problem of lack of effective planning processes within most FUGs. On the positive side hand there is little over-extraction of forest products. The only cause for concern from field studies has been that in some Sal forests FUGs had been slow to introduce effective regulation of offtake.

Through the successful establishment and initial progress of Forest User Groups in forest management, attention and efforts have moved to consolidate achievements, and so-called 'second-generation' issues have come to the fore. These concern how the new local governance institution can be mobilised for wider developmental benefits. These include maximising livelihood impacts, particularly on poorer groups and by gender. They also address how FUGs are linking up with other local institutions, and forming national networks, such as the Federation of Community Forest User Groups (FECOFUN), so deliver community development.

The study found that, within the context of diverse experiences, local people's livelihoods are generally experiencing significant benefits from the functioning of the FUGs, not only through improved and or more sustainable forest product flows, but also in a variety of other ways, as many FUGs are taking on a wider community development-planning role.

This paper is formatted in to 3 main sections. After the introduction there is a discussion on the evolution of Community Forestry policy in Nepal, its context, emergence and implementation. This is followed by an analysis of the social and livelihood context of Community Forestry. Then there is a discussion of findings regarding the management performance by the Forest User Groups. This is followed by conclusions, emerging issues and areas of concern.

1 Community Forestry: Context, Policy Framework and Implementation

Community Forestry has flourished in the middle hills, and this may be partly attributable to the circumstances in the middle hills of Nepal being almost 'ideal' conditions:

- High dependency on forest resources across households
- Cohesion and homogeneity within the local community at hamlet level – although greater heterogeneity at FUG level.
- Generally poor accessibility to markets, hence lower incentives from transgression and higher risks

However all of the above are not true all of the time – there is a great degree of diversity in local physical conditions, which will be discussed later in this paper.

1.1 The Resource Base in Nepal

Nepal runs for over one thousand kilometres in a transition zone between the Gangetic plain and the high Himalaya, lying between India and Tibet. It has a land area of 147,181 sq. km, a population of about 24million. Nepal is characterised by intense diversity – physical agro-ecology, social, ethnic and caste. In terms of the forest-agriculture interface, diversity exists across: a range of different altitudes and agro-climatic conditions; different forest types; varying accessibility and availability of irrigation.

The climate of Nepal ranges from subtropical monsoon conditions in the Tarai region to alpine conditions in the Great Himalayas. Annual precipitation is approximately 1,800 mm in the eastern Tarai and between 760 and 890 mm in the West. Average winter temperatures vary from 19 C in the southern Tarai region to 13 C in the inter-montane basins, and summer from 28 C to 21 C in the same regions. Nepal has three main physiographic belts, the Tarai, the Middle Hills and the Mountains. A fourth belt, the forested Churia foothills and the Inner Tarai zone is also sometimes distinguished.

The Tarai plain is low (180 to 360 m in elevation), flat, and fertile, being a northern extension of the Gangetic Plain. It is both agricultural and forested. Historically it was thick jungle and was sparsely populated, but in the post-war period it has become densely settled, since the malarial threat has been overcome through pesticide treatment. The attractions of improved facilities, and market opportunities compared to the hills led to rapid migration and now the population of the Tarai is 46.7% of Nepal's total. The most accessible areas in the Tarai tend to be the most densely settled such as the area along the east-west highway. In the Tarai there is more unequal land ownership, and less dependence on forest products within the farming systems.

The Churia Hills and Inner Tarai region (including the foothills, also known as the Siwaliks) are marshy and forested, and are consequently sparsely populated.

The Mountains: The Great Himalayan Range, reaches up to 8,800 m in elevation, and contains several of the world's highest peaks. The Mountain, 7.8% population live in Mountain areas, which are remote, and inaccessible. The communities living in the mountains often come to lower altitudes for the winter. Many are NTFP collectors, taking advantage of the high biodiversity in mountain areas, although in general NTFPs are as yet underutilised commercially.

The Middle hills: The Hills (as an administrative category) are located between the Tarai and the High Mountains. Elevations range from 200 m to over 3000 m. They account for 41 percent (60,436 km^2) of Nepal's total land area and 45.5% (8,419,889) of the population. The

hills have a temperate monsoonal climate supporting rain-fed and some irrigated terraced agriculture.

There is intense climatic, ecological and social diversity even across the Middle hills. This is most pronounced both between the lowlands and the highlands, and also from East to West. The middle-hills also have a complex topography, that encloses so called Doon valleys such as the Kathmandu and the Pokhara valleys, two flat basins drained by the Baghmati and Seti rivers, respectively. The densely settled Kathmandu valley is the political and cultural hub of the nation.

The CF programme has to date largely been confined to the middle hills. Althoguh there has been hand-over of some forests within the Tarai region the CF process has been slower and beset by more difficulties. Here conditions are very different from the plains: forests are more valuable and accessible and illicit felling of timber is widespread and well organised.

Forest Types:
Forests are one of Nepal's principal natural resources. It has been said that they cover about one-sixth of the country. There are a great diversity of different forest types present at different altitudes, and microclimates, each having specific uses. The main types for the Koshi Hills zone are illustrated in the Table below:

Table 5.1: Main Forest Types in Koshi Hills

Climatic Zone / altitude	Main Forest Types*	Main Species	Uses	% of FUGs in Koshi Hills
Tropical <1000m	Dry valley / deciduous hill forests	Sal (*Shorea Robusta*):	o durable high-quality timber, used for construction and agricultural implements such as ploughshares. o Leaves are also collected for plate-making, though are not suitable for fodder or compost	20%
		Other subtropical		2%
Sub-Tropical 1000-1700m	Lower mid-slope coniferous forest	Chir pine (*Pinus Roxburgii*).	o construction timber o resin if there is road access. o Needles are also used in some areas for compost, esp. for potato growing	20%
	Lower mid-slope mixed hard-wood forest	Katus / Chilaune (*Castanopsis sp./ Schima wallichii*).	o most useful forest type for fuelwood, leaf-fodder and timber needs of local people	42%
		Utis *(Alnus nepalensis)*	o Fuelwood and fodder	8%
Lower temperate 1700 – 2400m	Upper slope mixed hardwood forest	Oak (*quercus spp.*) / Rhododendron	o Fuelwood and fodder	5%
Other	e.g. scrub			3%

(Based on Branney and Dev 1994)

Forests tend to lie in belts above and below areas of agricultural land, and provide a variety of products and service, including grass and fodder, timber, fuelwood, and medicinal herbs. Forests provide a variety of NTFPs, the most lucrative of which is probably resin, collected from pine trees, although there are also many herbs collected and marketed to local wholesalers (who sell them in urban markets within Nepal and in India for the manufacture of ayurvedic medicinal products). (See Olsten 1997).

1.2 Livelihoods and Forest Use in the Middle Hills

There are three main livelihood patterns in the middle-hills. For most households agriculture is the main livelihood activity, based around the ownership of small terraces of farm land, irrigated and unirrigated. Poorer and land-less households depend on non-land based

activities such as labouring, artisanal work and NTFP collection. Richer households may supplement farming with incomes from local businesses, or service employment in the district HQ (for instance teaching). Furthermore, more wealthy households often have land outside the village, perhaps in the Tarai, and may spend only part of the year in the hills.

Different households have differing needs from the forests. The richest households commonly have both *khet* land (irrigated) as well as extensive *bari* land holdings (unirrigated land). They commonly have extensive on-farm tree resources, they may own grazing land and private forest and they usually own substantial number of livestock. Richer households usually hire agricultural labourers and they may also rent out land. They also commonly supplement farming with incomes from local businesses, or service employment in the district HQ (for instance teaching), or money-lending. Furthermore, more wealthy households often have land outside the village, perhaps in the Tarai, and may spend only part of the year in the hills.

Middle-class households commonly have land-holdings and cattle, but have fewer private tree resources and less grazing land to supply leaf-fodder, grass and leaf-litter material for compost-making. Hence they tend to be heavily dependent on inputs to their farming systems from forest land.

The poorest households commonly have little and sometimes no land, and so depend on tenuous livelihood strategies: a combination of agricultural labouring, portering, fuelwood selling, alcohol distilling, Non Timber Forest Product collection, blacksmithing and artisanal production, and small-livestock raising. Poorer households may have specific needs from the forest to follow these livelihoods, which are distinct from the other wealth-rank groups. These interests are vulnerable to being discriminated against in collective decision-making.

Livelihood patterns in the middle hills are in flux. Recent work on livelihoods (Blaikie et al., 1997, 1998; Seddon, 1999) has indicated that non-agricultural income is very much more important than previously thought, and has also profoundly altered the technologies of agriculture in general, through the withdrawal of labour and the injection of cash into the household economy. There is also an increasing pattern of out-mobility and out migration, and remittances.

Thus, although all households rely on tree products, there is a great variation from household to household and area to area. For example farmers are in many areas increasingly planting on-farm trees to support their needs, and some richer farmers also have patches of private forest.

The main forest products and their main users are as follows:

Domestic Needs
Firstly virtually all households depend on forests for a variety of domestic needs. On a day to day basis fuel for cooking and heating is required, and fuelwood from forests and on-farm trees is the primary source. Households tend to combine collecting on a seasonal basis with supplementary collection from day to day when necessary. More infrequently poles and / or sawn timber is required for house and fence construction. Whilst richer households prefer sawn timber, poorer households who cannot afford the sawing cost, use poles as a cheaper alternative.

Agricultural Needs
Most households' livelihoods in the middle-hills are primarily dependent on farming small patches of agricultural land. Culturable land is *the* primary household asset, and is distinguished in to *bari* (irrigated), and *khet* (rain-fed) land. The main crops on irrigated land are rice and wheat, and on unirrigated land maize and other cereals and lentils.

Due to the very limited size of land-holdings, hill agriculture systems depends on interdependence between the arable land, livestock and forest components. Extensive inputs are needed from forests:

- Grazing and fodder sources, both grazing within the forest, and the cut and carry of grasses and leaf-fodder for stall-feeding of animals.

- Leaf litter is collected for animal bedding, which then makes excellent compost to maintain soil fertility, along with the dung and urine absorbed.
- Agricultural implements are also important products for the forest – plough sets and ploughshares are the main ones, and Sal ploughshares require replacement on a regular basis.

Broadleaf forests, particularly Katus-Chilaune, are the most useful forests for agriculture, as they supply the most useful range of products, (fuelwood, fodder, leaf litter, foliage, small poles, fencesticks). In the Koshi hills almost 50% of standing forests handed to FUGs are Katus-Chilaune. There are other forest types which also provide various products.

Other Needs
Forests are important for a number of other rural livelihoods as well as agriculture and livestock keeping.

- Blacksmiths require both a supply of charcoal, and timber for implement handles.
- The collection of non-timber forest products, such as herbs and medicinal plants, pine resin, fruits, *katha,* ginger (*sothi*), and so on is also a significant component of some households livelihoods, particularly poorer and landless households, for whom such activities can provide income when there is a lull in other opportunities such as agricultural labouring.
- Fuelwood as commercial activity: fuelwood sale.
- Alcohol distilling can generate income for some households, who depend on forests for fuelwood, forest yeast (*marcha*), and sometimes berries.

Virtually all households depend on forests for a variety of domestic needs. On a day to day basis fuel for cooking and heating is required, and fuelwood from forests and on-farm trees is the primary source. Households tend to combine collecting on a seasonal basis with supplementary collection from day to day when necessary. More infrequently poles and / or sawn timber is required for construction needs.

1.3 The Emergence of Community Forestry Policy: Creating the 'Enabling Environment' for Local-Level Forest Management

Community Forestry policies emerged in Nepal as a response to 'institutional failure' at the local level, which, in conjunction with other factors had led in many areas to progressive degradation of hill forests.

Prior to the 1950s, forests in the mid-hills of Nepal had been held by local landlords loyal to the King. Tenure systems varied across areas, the main type being *birta,* under which the local landlords had the responsibility to manage the forest, and granted rights in turn to local households to use the forest. Although timber extraction was regulated, local people generally had free access to non-commercial forest products. Cultivation of millet in temporary forest plots (shifting cultivation or *khoriya*) was widespread (partly as a means to evade agricultural taxation).

During the initial period of democracy (1951-61), the forests were nationalised (under the Private Forests Nationalisation Act of 1957 and the *Birta* Abolition Act of 1959), partly in order to break the feudal power structures. These acts transferred most of the forest land to the state, under the *de jure* control of the Department of Forests (DoF). However the Department of Forests lacked the capacity to protect or manage them, and this created the *de facto* open access situation. (Soussan *et al* 1995)

The Department of Forests had been formed in 1942, under advice from the Indian Forest Service, in order to manage the exploitation of the valuable Tarai forests. In practice the Department of Forests had little capacity to enforce regulations on the use of forests, and to implement the strict protection-oriented terms of the 1961 Forest Act, and the later 1967 Forest Protection (Special Arrangement) Act. The institutional capacity of the Department reflects the fact that Nepal has a comparatively short history in terms of development of a so-called modern state. It emerged from feudal autarchy in 1951 and although it has developed

a large bureaucracy it lacks capacity and executive experience, compared with its larger neighbours. The institutional weakness is compounded by an underdeveloped physical infrastructure, and rugged terrain.

Local forest use continued after nationalisation of the forests of course, although much of it had become illegal, and Forest Guards had an impossible task to apprehend 'illicit' forest users. Due to nationalisation of the forest, the lack of local tenure and rights meant there was no incentive or mechanism for local users to regulate forest use. Resentment against nationalisation from influential local elites further added to unregulated extraction, and forest encroachment, putting locals people in a conflictual relationship with the DoF field staff. Forest degradation began to threaten the sustainability of mid-hills livelihoods.

Of similar significance for the condition and extent of the forests was the Cadastral Survey, conducted over the 1960s and 1970s, which demarcated land ownership and land boundaries, for tax assessment purposes. The opportunities for gaining formal ownership of encroached land led widely to forest encroachment and clearance.

Growth of district headquarters increased the demand for construction timber and fuelwood, also contributing to illicit felling for sale.

Over the late 1960s and 1970s recognition of the forest degradation grew, along with recognition of the inadequacy of the then prevailing exclusionary model of forest management. By the 1970s Department of Forests field staff had become convinced that the problem could not be solved through external enforcement alone: despite increasingly coercive policy instruments (such as the so-called 'Shoot the Bullet' Act of 1967). Re-involving local people in forest management became seen as imperative.

Community Forestry was the policy response. The fundamental concept of Community Forestry is to correct the local 'institutional failure' which led to the *de facto* open access to forests, by establishing a new community-based organisations through which local forest users are given collective management responsibility (although not ownership) for the local forests on which they depend for product flows (such as fuel wood, leaf and grass fodder, poles and sawn timber for agricultural implements, fencing and construction, and medicinal herbs). This would allow them to protect the forest and regulate product extraction. It would also empower them to plan forest management activities (such as plantation of appropriate species, or coppicing for fuel wood production) to reflect their needs from the forest.

The Community Forestry policy emerged in a series of three main groups of milestones between 1975 and 1993, as recognition of the need for reform came from both ground-level forest department staff, and international agencies.

The **first major milestones** in the implementation of Community Forestry came between 1975 and 1978. In 1975 the Department of Forests National Conference in Kathmandu assembled foresters to discuss and address concerns over the problems of forest management in the mid-hills. It was concluded that there was a pressing need to involve local people. The issue then became on what basis to involve them.

The main outcome of the 1975 conference was the 1976 National Forestry Plan, which represented a major shift towards community involvement in forest management. It acknowledged deterioration in the hill forests and the need for community involvement in forest protection and ensuring local needs. Following from the plan came the First Amendment of the Forest Act in 1977, which categorised forests and provided for the handing over of forests to Panchayats.

In 1978 further updates were made to the 1961 Forest Act by the introduction of the Panchayat Forest and Panchayat Protected Forest legislation. This gave detailed rules for hand-over of management responsibility for specific forests ('Panchayat Forests' and 'Panchayat Protected Forests') to local Panchayats, to be protected by local people. After 1978 this handover of forests proceeded on a gradual basis. This policy however transferred '*responsibility without authority*', and the emphasis was on protecting new plantations and on 'motivating' people from outside, rather than providing proper incentives.

In 1978 the World Bank review of the Nepal forestry sector produced an alarmist report which prompted action to reverse forest degradation. Bilateral donors also pushed for reform of the forestry sector from the 1970s onwards

The 1980s was a period of intense activity and experimentation to spread a variety of forms of community forestry, spurred on by the Sixth 5-Year plan (1981-85) (which declared Nepal's forest sector policy, emphasising community participation in the management conservation and utilisation of forest resources). Donor projects, most prominently the Australian and British, played a key role in facilitating the reorientation of Forest Department staff and experimenting with different support approaches.

Encouragement continued over the 1980s in various policies. In 1982 the Decentralisation Act formalised duties and responsibilities of village Panchayats and ward committees, and empowered them to form peoples committees for forest conservation and management. In 1984 the Decentralisation Act and Rules specified terms of hand-over of forest to Panchayats. In 1985-90 the Seventh Five Year Plan explicitly prioritised the mobilisation of people's participation in afforestation and forest management to ensure their subsistence needs are met. Again in 1987 the Decentralisation Act introduced legislative structure through which planning and administration of a wide range of government activities were to be decentralised. It introduced the concept of 'User Groups' for local administration.

The **second major milestones came in 1987-88.** Recognition of the need to effectively incorporate the needs of local people in Community Forestry was achieved in 1987 at the First *National Community Forestry Workshop*, held in Kathmandu. DoF and bilateral project staff came together, discussed progress of CF and made policy recommendations, including acceptance of the User Group concept. This led to wider recognition of the need to extend community forestry and allow local people greater control and autonomy to utilise forest resources.

The Master Plan for the Forestry Sector (HMG 1988) made Community forestry the major component of forest policy for the mid-hills, and provided the basis for a new draft forest policy. It declared that all the accessible forests in the mid-hills should be handed over to the local communities, formed into User Groups, and that there should be reorientation of the Forest Department staff towards this new priority. It allocated 47 percent of investment within the forest sector in support of CF programmes.

In the 1980's community forestry initiatives had been promoted within the structure of the prevailing panchayat system; a fact that restricted their development, as many sections of the community saw them more as means of entrenching local elites than enabling real participatory management. *Panchayats* became recognised as an inappropriate institutional basis for community management, not only due to elites, but also because they rarely coincided with the actual forest users.

The situation changed due both the introduction of the Forest User Group concept, and more dramatically following the abolition of the panchayats after the 1990 revolution. The actual forest users themselves became the unit for organisation, and Forest User Groups (FUGs) emerged as the appropriate institutional form.

The local Forest User Groups (FUGs) were provided a strong independent legal foundation, as they could not be closed by the Forest Department. Community Forestry ensured consideration of local peoples 'basic needs', through product distribution by the FUG. FUGs have to agree Operational Plans in conjunction with the local District Forest Officer.

Each FUG has a management committee, which represents their members (the forest users) in the development and execution of village-level management plans. These plans determine the uses made of the forest resource, and the level of products harvested. The committees also liase with Department of Forests (DoF) officials.

Between 1988-1990 community forestry process evolved on the basis of a clearer understanding of local needs. In 1990 Operational Guidelines for the Community Forestry

Programme were issued which consolidated the shift of DoF role towards facilitation rather than control.

Panchayat democracy, an elitist and semi-feudal form of government, lasted until 1990, when, in April there was a popular revolution in Nepal. At this time multi-party democracy was re-established, and the single party patronage-based panchayat system at local level was replaced by the more democratic Village Development Committees. After the resumption of Democracy, the rate of forest handover accelerated.

The earlier advances were consolidated by the **third milestone**: the Forest Act of 1993 (and associated Forest Rules 1995). The new Forest Act repealed the Panchayat forest legislation of 1961 and 1967, formalised the innovations in community forestry practice, and provided the legal and procedural basis for Forest User Groups to become local-level autonomous forest management bodies. Since 1993 there has been hand-over of forest management authority on a wide scale across the mid-hills.

The 3rd National Conference on Community Forestry in 1998 reaffirmed the importance of Community Forestry, and planned a number of improvements to implementation approaches, including to post-formation support capacity.

Current status: Since democratisation, although there has been political reform, radical economic reform (for example land reform) has not yet been achieved, in the face of enduring inequalities of power. At the local level the actual power holders from the panchayat era continued to exert influence in the new party situation. Nationally, Democratically elected governments have been unstable and often lacking in capacity. Social disaffection, especially over perceived government corruption, has coalesced into a revolutionary Maoist social movement whose activities are rapidly expanding in scope. In the light of the gloomy situation the CF policy has actually made considerable headway. The state has relinquished some revenue raising capacity and devolved control of some forest resources.

A number of recent developments have cast a shadow over the unambiguously positive assessment of policy development in Nepal. Until recently it appeared that through negotiation policy was evolving to support the role of the Forest User Groups. The Forest (Second Amendments) Bill, 2001, however sought to amend the 1993 Forest Act in a number of fundamental ways, to restrict the rights of the FUGs. This bill has been strongly criticised and through a high level of representations has been withdrawn. However concerns remain amongst CF activists that the policy environment is becoming more complex and perhaps less sympathetic.

The extent to which the state forest departments are prepared to relax their monopoly on forest ownership and control is a critical factor determining the success of PFM in practice. There is an implicit assumption in the PFM model that the motivations of the state are neutral and technocratic, whilst in practice considerations of resource control, patronage, and revenue can greatly influence decisions over whether and how to share management with local people. PFM schemes may emerge in areas where previously unsustainable forest management regimes have been built on alliances between the state and client elites.

The likelihood of successful PFM collaborations is high where the motivations of the state forest departments and local people are both high. These conditions are *most* likely be found where the forest is partially degraded and of little immediate revenue potential to forest departments, and where local people are in settled, cohesive communities, and dependent of the forest for essential household products such as fuelwood or animal fodder. These 'ideal' conditions are often found in remote hill areas, and inaccessible areas not strongly incorporated into market relations (Gilmour and Fisher 1991). But these conditions are at one end of a spectrum. Where forests are not heavily degraded, and are of present revenue potential, then Government agencies may not be so willing to relinquish resource control, management and product flows with local communities. Conversely, where local people's livelihoods do not depend so highly on forest products they may not be so inclined to commit time and energy to the group decision-making and forest management activities.

Thus in Nepal Community Forestry has been most widespread in Middle-hills areas, whereas in the Tarai, where the Sal forests are much higher value, Community Forestry has hardly taken off.

1.4 The Implementation of Community Forestry

The implementation process is a critical determinant of the policies' success on the ground. The implementation process demands rapid institutional change, both at village level and within the Department of Forests, and changes in working relationships between these levels. For both the Forest User Group and the Department of Forests, implementation has meant a long-term and still ongoing capacity-building and reorientation process.

The Department of Forests' main responsibilities in the middle-hills are changing from the traditional role of forest protection and policing to become:

1. FUG formation and forest handover
2. Post formation support to FUGs, as well as monitoring
3. Protection and Management of remaining National Forests not transferred to FUGs

The initial forms of CF which emerged in the 1980s had a technical focus on forest resource improvement, and so involved local people on an 'instrumental' basis. Degraded forestlands and new pine plantations in particular were handed over to communities in order to ensure their regeneration, but standing forests were not. This approach was not entirely successful as it did not address local people's own needs.

Gradually by the early 1990s a more 'people-orientated approach' had emerged, often instigated by foreign donors. The 1993 Forest Act led to a re-orientation for the Department of Forestry (DoF), and a move to 'basic needs' CF, via forest handover to Forest User Group (FUG). Suitable forest lands were identified for handover as the policy goal became rapid handover. As with many similar community-based natural resource management programmes, the capacity of the Government Department involved has become the key constraint to implementation.

1.4.1 Formation of FUGs and Handover of Forest

The challenges of 'scaling up' the Community Forestry implementation have been very great, under conditions of resource constraints and incomplete reorientation within the DoF, and the achievements are laudable.

The forest land identified by the DoF for CF handover was 61 percent of the total forests (an estimated 3,355,000 ha). A further 2 million ha has been set aside for national parks, protected and conservation areas. (NUKCFP 2000). Formation has proceeded at the rate of about 1,000 FUGs per year. By the end of 1999 there were 9,874 FUGs formed across Nepal, managing 747,908 ha of forest land, equivalent to over 12 percent of Nepal's total forest cover. Whilst undoubtedly a significant achievement, it is less than a quarter of the forest set aside for Community Forestry, and still leaves over 2,600,000 ha to be handed over.

As the handover process has advanced, the statistics for potential CF land have become recognised as inaccurate compared to the ground reality in many districts. Nepal's forests have been categorised (by Nelson & Tamrakar (1991)) as potential NF and CF, and these classifications are used in district-level planning. In Dhankuta district according to Nelson & Tamrakar's approach, about 51 % of potential CF land has been handed over, and so 49% ought to remain. However, the District Forest Office claims that hardly 10-15% of total forest remains to be handed over. Nelson & Tamrakar also identified over 12,000ha as National forest in Dhankuta, whilst in reality there is virtually no potential NF. It is clear that the forest statistics need to be revised through a re-survey of forest areas.

Table 2.1: Proportion of Community Forestry Area under Management of FUGs

No. of FUGs formed	Forest Area under control of FUG (ha)	Potential CF (non-forest - barren) area (ha.)	Potential CF (forest) area (ha)	Potential NF (ha)	% of potential CF area under management of FUG
9,874	*747,908*	*1,876,273*	*1,595,927*	*2,313,131*	*22%*

Sources: *Central Bureau of Statistics HMGN (1998), NUKCFP (2000), S. M. Tamrakar and Nelson, (1991)*

With pressure on DFOs to form as many FUGs as possible, both from the centre and from users themselves, the initial emphasis on quality changed to an emphasis on quantity. This inevitably led, firstly to short-cuts in the FUG formation process, and secondly to a deferment of more difficult locations (such as those with conflicts, which require more time for forest handover).

Demand for FUG formation has exceeded the capacity of the local Range Post staff, resulting in long backlogs. Those nascent user groups awaiting formal handover are advised to protect the forest on an informal basis until formation can be effected. Many of these non-FUG sites are facing particular difficulties due to the lack of support for conflict resolution.

Conditions at Formation and the Formation Process
From the study sample of 11 FUGs in the Koshi Hills, 7 were experiencing a partial or general deterioration of the forest resource prior to formation the remaining 4 already had some form of protection in place, either as Panchayat Protected Forests, or informally which the users themselves had organised.

The initiative to form the FUG had come either internally or externally, and sometimes both. Four of 11 FUGs studied (63%) showed internal initiative to form into FUGs once they had heard it was possible, and had contacted the Range Post independently. Also in 4 of 11, the DFO had requested the users to form into an FUG with Range Post support, out of concern for the deterioration of forest. In 3 FUGs there was a combination of initiative from both sides.

The FUG formation and forest hand-over procedure involves a number of steps, which are carried out by the field staff of the Department of Forests. Ideally this process should involve extensive discussion and awareness-raising, and so take several days.

Box 2: The 'Ideal' FUG Formation Process

- The actual local forest users are identified and involved in initial discussion with the DoF field staff.
- *Tole* (hamlet) meetings are held: a process of awareness-raising regarding CF concepts and practice is followed, and the users needs from the forest are discussed.
- a general assembly meeting is held in which:
  - The users are constituted into a FUG, legally formalised in a Constitution, drafted by the users in conjunction with DoF field staff.
  - A Forest Users Group Committee (FUGC), with a Chairman, are elected by an assembly of all members.
  - The Range-post staff discuss best practices in inclusive decision-making and planning, and technical advice on the potentials from the forest and recommendations from optimum management.
  - The users plan and draft their forest management plan: the Operational Plan. The forest to be handed over is clearly defined, with all parties having a clear understanding of the actual forest boundary.
- The District Forest Officer (DFO) must then approve the Operational Plan and Constitution. If so the forest management responsibility is given to the FUG and they may commence operations.

In practice, serious short-cuts in the formation process have been the unfortunate norm, as Range-Post staff rarely complete all the procedures described. The general experience of FUGs has been that the formation procedure is far too swift, and short-cuts are taken. In

almost all 11 FUGs studied users found the formation support unsatisfactory and hasty. In only 2 FUGs did users consider the formation procedure thorough and satisfactory.

Since the initial formation strongly conditions the future development of the FUGs, the rapid pace of FUG formations and forest handovers has inevitably led to institutional weaknesses in FUGs. ? main concerns arose from the field study:

Firstly, and most importantly, the formation process had often been elite-based not tole-based. Rather than being a 'participatory' process, the Range-Post staff has generally liased with elite groups in the settlements (the males of higher castes (e.g. Brahmin and Chhetri castes), and only in only some had held in-depth *tole*-level discussions with all the users, to identify their needs and wishes. *Tole*-level bottom-up planning had not been emphasised as a best practice for decision-making within the FUG. Consequently FUGs have generally replicated these elite-oriented decision-making practices after formation. Even where wider discussions had been held, users often felt that the procedure had been mechanistic, in the sense that their expressed views had not been taken into account in drafting the FUG's Constitution and Operational Plan.

Secondly, *actual* forest user identification is often not properly discussed before the list of users is drawn up for the Constitution, and so can reflect the perceptions of just the elites of the villages. User lists often have to be revised after formation, sometimes leading to intra-group disputes and conflict. Conflict has also ensued in some FUGs from the mistaken thinking that traditional users can be excluded in order to simplify management and reduce the burden of use on the forest. For example in Jalkini FUG in Dhankuta District a group of blacksmiths below the forest were excluded from the user-group although they were known to traditionally use the forest. This meant that the FUG when it started functioning was seeking to stop their use of the forest. As they depended on the forest for fuel for iron working they had no alternative but to break the regulations.

Thirdly, the Forest Boundary is often not clarified at handover. The maps on which forest handover is based are almost always out of date: forest boundaries have changed, including through illicit encroachment. If the actual boundary is not clarified, and encroachment issues addressed at this stage, the FUG can inherit serious boundary conflicts which can cause problems for years to come. Some FUGs do draft revised forest maps at the time of hand-over, or later but many do not.

Fourthly, FUG Constitution and Operation Plans have been often drafted by the Range-Post staff themselves, without a thorough participatory process of consultation with the users to reflect their needs and objectives. Most users were left with the mistaken belief that the Range-Post staff should prepare the Constitution and Operation Plan. Range-post staff are also are vague regarding their roles as stated in the bylaws; they should provide support to the FUG to write its own Operational Plan, rather than writing it themselves.

Firthly, awareness and understanding of Community Forestry issues has often not been properly imparted to the users, and even not properly to the FUG Committee in many cases. Thus many FUGs are left with a poor understanding of Community Forestry concepts, roles and responsibilities, proper procedures and best practice. Nine of the 11 FUGs studied assessed the formation procedure as 'poor', in terms of being too fast to establish a clear understanding of the concepts of Community Forestry, and of the different roles and responsibilities and procedures in the FUG.

Policy Implications
A swift formation procedure remains a pragmatic necessity, in order to change over to the new Community Forestry regime as quickly as possible. However the generally poor quality of the hand-over gives FUGs a weak start. Most FUGs have urgent support needs such as clarification of roles, responsibilities and procedures, boundary clarification and conflict resolution and so on. It is imperative that 'problem' FUGs are not neglected after formation.

Timber Demand in District Headquarters

One important group of users in many cases near bazaars is timber-merchants. As more mid-hills forests are handed over to FUGs, who are successfully regulating timber felling and stopping illicit timber smuggling, there are increasing supply problems of construction timber for district centres. FUGs could themselves fulfil this demand in a regulated way but so far the Department of Forests in Nepal has objected to FUGs trading in timber, after a few incidents of over-felling. At present it appears that the issue is being circumvented by DFOs avoiding the transfer of some timber-yielding forests to the FUG and instead giving contracts to fell trees in them to local contractors. The clearest example of this is Heluwa Besi. Demand in bazaars for timber is also being met by illicit felling. Both methods of supply mean that non-FUG forests near bazaars are facing increased and unregulated extraction and are consequently deteriorating.

1.4.2 Post Formation: Planning for Targeted Support

FUGs are new village institutions, and initially they only function with limited effectiveness. Thus they often restrict their initial activities to just forest closure for regeneration. However with time and effort they generally become more effectively institutionalised, and develop along a number of processes, as identified in this study (discussed in Paper 2):

- User Organisation and Cohesion
- Forest Management
- Forest Product Distribution
- FUG Decision-Making and Implementation
- Communication and Awareness
- Gender and Equity Consideration
- Economic Development
- Livelihood and Community Development
- Conflict Management
- Linkage and Network Development

The DoF's role is to monitor and support the FUG's progress. The FUG has legal right to claim support services from the District Forest Office, and FUGs are also free to collaborate with other organisations.

FUGs have a number of needs, specific to their particular stages of development. The most common areas of needs are:

- Resolution of conflicts, especially over forest boundaries
- Support to facilitate inclusive planning and decision-making, and to raise awareness,
- Support and provision of appropriate technical advice on specific issues, e.g. plantation and protection, fund management etc.

The new role of facilitation, support and monitoring requires Range Post staff to co-operate with forest users, and demands skills of group meeting facilitation, and technical advice on multi-use silviculture and other issues. These roles can be particularly demanding on the 'front-line' forest guards, used to just policing roles.

As the DoF adopts a post-formation support orientation, they are required to shift from uniform provision of service (the case in formation), to a targeted provision of specific support to fulfil specific needs.

Current Post Formation Support Practice:
Currently, DFO field level support activities are annually pre-planned on a somewhat inflexible target-oriented and budget-led basis. The DFO sends plans for the quantity of activities to be achieved in the year ahead (for example FUG formation, forest handover and trainings to be given) to the Deputy Director General (Community and Private Forestry Division, Department of Forests), who liases with donors for funding and sends these on to the Ministry of Finance. for budgetary approval, and then on to the Planning Commission. Finally, subject to review, the budget is approved and released by the Ministry of Finance.

The main emphasis of DFO support has been on off-site trainings for individuals, usually FUGC members. Although these are not highly valued within the FUGs as what was learnt by the individual attending is in practice rarely transferred to the whole group, some particular trainings can be of great help. In Patle Sanne (site 3) and Ramche (site 5), it was apparent that the training of the female animator by the NUKCFP project had been of benefit to the

women in the FUGs. There is also currently a positive move toward field-based training occurring in DFOs.

Nine of the 11 FUGs studied were dissatisfied with the level and quality of support. Most committee members want more regular contact with Range-Post staff, for moral support and motivation, basic awareness-raising, technical and legal advice, and guidance on facilitating meetings. This could be dealt with through regular attendance of RP staff at assembly meetings – not just as a token presence, but as a skilled facilitator giving technical advice, promoting best-practice and encouraging the self-sufficient development of the FUG.

The consequence of a lack of appropriate support from the range post has been that where issues such as boundary conflicts might have been resolved at an early stage they have languished or deteriorated with time.

Need for Support Planning Based on FUGs Actual Support Needs
With so many FUGs with urgent support needs, and only limited DFO capacity, effective planning of RP staff time is essential. Range-Post staff need to know the specific and prioritised support needs of each FUG in their Range. Currently Range-Post Coordination meetings play this role to some extent. The Micro-Action-Planning procedure detailed in paper 4 is one tool which supports this in a more 'bottom-up' manner. FUGs can follow an annual planning process and then give the range-post staff a copy of their action points and support needs for the year ahead.

FUGs support which moves them towards becoming self-reliant rather than more dependent on the Range Post. In the case of Bokre Danda (study site 13) there was intense initial support and guidance over three years from the Range Post, but this had led to over-dependence, and when this was withdrawn the FUG was not able to continue functioning properly.

Range-Post Capacity
The capacity of the Range Posts remains a key constraint to the rate and quality of FUG formation process, and development of FUGs once formed, as it is inadequate for the required support tasks. This is due to both the extensive geographical areas under their responsibility and also the poor incentive structure, poor resource planning, and inertia of bureaucratic management practices.

The Range Post staff are on the front-line of contact and service provision to Forest User Groups, yet many feel they are also lacking suitable support, training and re-orientation for their new responsibilities. Well-educated and trained Forest Rangers supervise Forest guards who are mainly untrained and with a low level of education, and with previous experience from the prior policing role. Since the DoF service delivery is fully dependent on the Forest Guards, improvement of this capacity is critically important. So far only 2-3month 'upgrade' training has been seen as adequate.

From research experience it was found that although Forest Guards are largely local and so can mix easily with people, they are variable in abilities and motivation, and many are lacking confidence and capability in facilitating user meetings, dealing with different types of users, and providing technical advice. Hence they often adopt a passive or over-formal role in villages, and lack the confidence or social skills to participate actively. The motivation and manner of range post staff has been questioned by some FUGs. In some instances they were felt by forest users to be 'heavy-handed', authoritarian or paternalistic. In other instances, visiting forest guards were felt to have a low level of motivation or interest in the FUG, not taking opportunities to give advice or facilitate debate even on the rare occasions when they visited.

There are some positive signs both that motivation of many staff is improving, and that many DFOs are prompting a more supportive field orientation for their Range-Post staff. The Women Rangers and Women Forest Guards, promoted by projects such as NUKCFP, have also played a positive role in this.

Frequent Transfer of DFOs in hill districts can compound local capacity problems as it disrupts the development of strong working relationships between the DFOs, Range-Post staff and the FUGs. Much of the cultural change occurring within the DoF depend on the personal orientation, enthusiasm, and leadership of DFOs.

There are a number of Specific Support Issues which are arising in FUGs
The Constitution and Operational Plan amendments procedure is weak. It requires the DFO to approve any amendments made, but in practice obstructs the functioning of the FUGs, as the DFO is taking years in some cases to return the documents.

There is a lack of meditation capacity for conflicts, as Range Posts have so far been unable to provide this. This is leading in some cases to local networks emerging. In Ahale, the Bokhim VDC (Village Development Committee – an administrative body covering a number of villages) FUG network has evolved, which unites the interests of 17 FUGs. Its main objectives are conflict mediation and resolution.

The potential for FUGs to manage forests for commercial timber harvesting objectives is a controversial issue. The possibility has so far been played down by the DoF, though informal obstruction (via circulars from DoF to DFOs requesting FUGs follow excessively complicated requirements to do so). DFOs have generally discouraged and refused to approve FUGs Operation Plans, which have included timber marketing.

1.4.3 FUG Self-Support: Linkages with other groups both within and outside village (e.g. FUG Networks etc)'

FUGs have provided a new local level decision-making forum, which have become, where they exist, the most decentralised level of governance. Many have shown that they can serve as a basis for not only forest management but also wider local level development planning. They can serve as a conduit for the explosion of village level development activity which has occurred since the coming of democracy in 1991, both through line agencies, bi-lateral donors and non-governmental organisations (NGOs).

To play their evolving role most effectively FUGs are beginning to develop networks and linkages for a variety of reasons: to resolve conflicts, make resources and techniques available, share experiences, and to get support for their planned activities. Linkages are also important to safeguard the interest of FUGs both at local and national level.

There are various types of FUG network:
VDC level FUG network (for instance Bokhim Network). VDC-level networks are very active and supportive to FUGs in local development issues, and are a major potential in the future development of FUGs.

Product Networks (for instance Patle Resin Network). Where a number of FUGs are producing and marketing a similar product, they can find forming a network helps in

Range-post level networks (for instance Sankhuwasabha). The Range Post staff in some areas have facilitated FUGs to network

FECOFUN (Many districts throughout Nepal)

The majority of users in the study areas, at *tole* level are not aware of existing linkages and networks which have been developed either by FUGs or initiated by outsiders. But they say that their FUG needs to develop linkages with line agencies and other supporting agencies to acquire the necessary help.

Many different line-agencies and NGOs are promoting local village development, by forming groups according to their organisational objectives. What is lacking is a discussion on what potential exists in the community to utilise them.

FUGs are only one of a number of institutions working at the local level; others include the Village Development Committee (VDC), Line agencies such as WDO, FUG networks, NGOs and so on. The more effectively these groups can co-ordinate their work and provide mutual support the greater the benefit at the local level.

- In 6 of the 11 FUGs studied there was good networking and linkage development between the FUG and other groups:
- In 2 FUGs studied VDCs are co-ordinating FUG networks to support the individual FUGs with conflict resolution and forest protection. In other FUGs VDCs are moving in this direction.
- In 2 FUGs local FUG networks are providing support: both FECOFUN and 'Range-Post Committees'
- In two FUGs UNDP Local Governance Project workers are co-ordinating tole support with the FUG.
- In Ahale FUG many line agencies are co-ordinating their activities with the FUG.

Some district level agencies complain that with the explosion in agencies working in the field it is difficult to find villages without other agencies operating there. Clearly the more support the better, but support needs to be co-ordinated and planned to ensure it is evenly distributed. The FUG, through micro-action planning, can play the role of co-ordinating what activities take place, and ensure they fit local development priorities.

It has often gone beyond the capacity of Range Posts to directly support FUG development. In some Range Posts there are over 50 FUGs. It is therefore important to encourage all FUGs in each RP to make a forum to interact for sharing learning and support needs – so both FUGs and RP can benefit. Different formats are evolving in different range-posts:

- FUG independent networks,
- RP FECOFUN in many mid-hill districts, and
- Range Post CC in Sankhuwa sabha
- VDC level networks prompted by VDC, which in some cases are linking together across VDCs within RP (e.g. in Bhojpur).

Village Development Committees (the lowest level of local government), made up of wards, often contain many FUGs. Some VDCs have started holding FUG network meetings to promote interaction, conflict resolution and development planning.

FUGs and DoF are the main stakeholders in CF, and with the emergence of VDC and DDC as strengthened local governance institutions, after the **Local Self-Governance Act 1999,** they are playing an increasingly important role in co-ordinating local development. FUGs, which are the only permanent local institution below the level of VDC, can potentially play a valuable role in tole-level development planning, mobilisation and implementation. However there is currently uncertainty now over division of responsibilities and control at local level between DDC, VDC, and DoF.

2 'Communities': The Pattern of Settlement, Livelihoods and Poverty

The central purpose of CF is to regenerate forests in order to ensure sustainable fulfilment of local subsistence needs, especially fuel wood, construction timber and poles, agricultural implements, charcoal, grass and fodder.

2.1 Settlement Patterns and Social Composition of Forest Users

People in the middle hills live in scattered hamlets (*toles*) surrounded by agricultural land, and these hamlets are located between belts or patches of forests. The actual 'community' exists at the hamlet level, where there is ongoing face-to –face daily interaction, and ethnic-based cohesion.

FUGs tend to be constituted of a number of hamlets, and as such the 'community' is constructed through formation and rarely reflects a cohesive group with convergent interests. Different groups have different priorities from forests depending on their livelihood strategies and frost product needs, their location in respect to the forest, and the nature and condition of the forest itself.

2.1.1 Diversity of Forest Users in FUGs

We have already seen how there is a diversity of diffent wealth levels in local settlements. Wealth and income levels can reflect into political influence at the local level

Because those people who live closest to the forest can use it more frequently, they tend to have more interest in its management than people living further from forest.

Forest users can sometimes belong to more than one user group as they have different needs from different local forests, and traditional interdependencies between different forest areas are continued under the new institutions. On the other hand some FUGs have management responsibility for two forest areas, where the local forest alone is insufficient for their needs.

In FUGs where users have been properly identified, and known to each other within the community the feeling of users own organisation and cohesion is high. This is most apparent in smaller FUGs, especially where there is ethnic homogeneity. It is also seen in larger FUGs where users are highly dependent on the forest resource, or where the forest resource brings great benefits, such as in Patle FUG (Dhankuta District) where resin revenues are funding community development schemes.

Where diverse users are unable to base a working relationship on common understanding or interests conflicts can result. This is evident in a number of larger FUGs studied where elites interests and concerns diverge from those of poorer groups, consensus is not reached. In frustration many poorer users feel the only solution is to split the FUG into smaller FUGs – a sentiment evident in at least three of the 11 FUGs studied. An alternative or perhaps complementary measure is improving decision-making processes by firmly basing it on tole-level discussion.

Households live at different distances from the forest they use. Some users may live more than an hour's walk away. More distant users tend to visit the forest less frequently and collect fewer products. Three broad types of user may be distinguished:

1. Regular forest users: depending on the forest perhaps daily or weekly for products such as fuelwood and fodder.
2. Occasional forest users: using the forest only seasonally or infrequently, for instance for grazing, for timber, or as a coping strategy when in difficulties.
3. 'Future' forest users: some richer users and remote households may not collect in the present, but anticipate timber and other products for themselves, or for future generations. These sorts of users are not specifically identified or involved in CF activities.

Of the 11 FUGs studied, 5 (46%) had problems regarding user identification. The problems were of 3 main types:

Firstly, some FUGs are **poorly institutionalised**. This is partly due to the common problem of incomplete formation, where the basic organisation and listing of the users was not completed. But whereas in many FUGs this has subsequently been completed, in weaker FUGs it remains uncompleted. In both Bhaludhunga FUG and Nakla Daskhate FUG some forest users are not included in the users' name list, and many included in the list not active forest users. Tole representatives could perform function of identifying actual users.

Secondly some actual forest users have been **deliberately excluded** either at the time of formation or subsequently. During formation this may be due to distance, unpopularity and prejudice. After formation this may be due to contravention of bylaws, or failing to pay levies, or moving to the area and not being admitted.

- In Jalkini FUG about 20 blacksmith households in an upper tole, who had traditionally been using the forest as a source for charcoal, had been excluded form membership due to prejudice against them regarding previous illicit felling issue. As they are also members of a number of other local FUGs they were able to find sources of charcoal elsewhere, although due to this their workload had been increased. The matter reflected the poor formation process, and the autocratic leadership in this FUG, which was gradually being corrected.

- In Sibhuwa Salghari the Chairman set levy in order to upgrade school (for which he is teacher). Poor users couldn't pay - and were not concerned - so some that have not paid have faced exclusion - having t rejoin after paying membership fee.

Thirdly, in some FUGs '**occasional' users have disproportional influence**. In Ramche FUG the DFO had insisted that some bazaar-inhabitants were included as FUG members. These secondary users from Khandbari bazaar have only been interested in timber supply from the Sal forest, and have influencing FUG decision-making to receive high level of timber. In Helebung FUG 'future' users from distant areas who want rights to timber in the future are FUG members, but rarely attend meetings, which has made it difficult for the FUG meetings to reach quorum.

In 2 FUGs these problems had been addressed through the Micro-Action-Planning process. In Bhaludhunga FUG users had been reassessed to ensure only genuine users were included as members. In Ramche FUG a new category of 'secondary users' was introduced for bazaar dwellers, with lesser powers than primary users, in order to reduce their influence on the decision-making of the FUG.

The formation of FUGs has led in many cases to improved natural capital and consequent improved and sustainable benefit flow in the longer term (after a transition period of 'stinting', which may have caused hardship for those households which depended upon the forest in the face of insufficient private holdings of agricultural land).

FUG Management plans specify objectives of forest management; which products are produced; and which may be taken. The actual livelihoods benefits depend on collective decision-making process, which are a matter for negotiation, to combine needs and wants of local people with productive potential of forest land but may be dominated by elite interests.

3 Forest Composition, Status and Use under Community Forestry

3.1 Forest Resources of the Middle-Hills

There has been intense debate over the extent of **deforestation** in the middle-hills of Nepal. Recent studies suggest that the actual extent of forests has not reduced for perhaps a hundred years, although the density has been under pressure, (LRMP, discussed in Gilmour and Fisher 1991). From field study it is clear that deterioration of forest was a pressing concern to most forest users prior to the introduction of FUGs. However the situation is highly variable from place to place; in smaller forests under intense use the issue was much more acute than in extensive forests far from settlements. Users also expressed concerns in some forests over availability of particular products (e.g. sal for plough shares) rather than for forests in general. This reflects that Sal forests are particularly vulnerable to over-use, as they provide such valuable timber for construction and agricultural implements.

3.2 Forest Management under Forest User Groups

This section considers how the forest resource has been affected by Community Forestry. Forest management is perhaps the fundamental process in Community Forestry. It is multi-facetted, involving a number of different sub-processes:

- forest boundary definition
- forest protection
- forest blocking and development planning

- *godmel* (thinning, pruning, cleaning)
- selective felling
- intercropping for short-period income generation
- NTFP production and collection.

Different FUGs have different types and sizes of forest resources, and different users' needs from them. Most user groups have a predominant forest type, in combination with other forest types

The effects of FUG forest management are highly contingent on how well it is performed, which relates to the level of development and effectiveness of the FUG institution. Forest management practices of FUGs are often initially at the most simple level: defining the forest boundary, protection and perhaps some re-planting. After achieving this and developing cohesion within group there is usually a progression towards more confident 'active' management of the forest. Gradually, some FUGs, with increased confidence and cohesion move on to a more active utilisation of forests. This can involve rotational block-wise management for multiple objectives: both for the direct benefit of users as well as to generate funds.

The process indicators identified from the participatory assessment are as follows:

Process Indicator	**FUG:**										
Key: ♦ *- good:* ♦ *- medium:* ♦ *- poor*	**1. Bhalud**	**2. Jalkini**	**3. Patle**	**5. Ramch**	**6. Dharma**	**7. Sibhuw**	**9. Ahale**	**10. Paluwa**	**11. Nakla**	**13. Bokre**	**14. Helebu**
Forest boundary defined	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Effective forest protection	♦	♦♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Forest condition good or improving	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Active forest management	♦	♦	♦♦	♦	♦	♦	♦	♦♦	♦	♦	♦

For a detailed summary of each FUG forest studied the reader is referred to Springate-Baginski et al 2001, Annex III)

The study strongly confirms that the forestry aspect of community forestry is an unambiguous success. Prior to formation of FUGs forest resources at almost 75% of study sites were deteriorating, and now all are improving to a greater or lesser extent.

This is due to relatively effective protection measures, a virtual end to illicit felling, reduced fire damage, and regulated product extraction. Prior to the formation of FUGs unregulated extraction and illicit felling were felt by local people to be problems in most of the study sites, and were felt to be causing forest deterioration. Open grazing, unregulated extraction and illicit felling have now been brought under control and forests are improving in all of the 11 FUG sites we looked at. Even where illicit felling continues, as in Jalkini (site 3) it is much reduced, and is likely to diminish further.

The reason that forest product extraction has become regulated is that in general users are treating the management of their forest responsibly. The transfer of control of the forest to the FUG has spread a sense of ownership amongst users: that it is the users' and not the government's forest. The institution of the FUG provides a relatively effective mechanism through which the users can regulate forest use.

Forest management has however remained generally relatively 'passive' in the sense that few FUGs have adopted more active management regimes. Although there are gestures toward planned blockwise management in many FUGs this is largely due to the Range Post's promotions. Mostly management activities tend to be either ad-hoc and inconsistent, or '*laissez-faire*'. There are only two FUGs in the study which could be said to have adopted a systematic 'active' forest management strategy, in the sense of time-based planning of block-wise management activities. This is a major area in which FUGs could develop their potentials, as at present the forest management is very much sub-optimal.

3.2.1 Forest Boundary Defined

Most FUGs studied (7 of the 11 or 64%) have not managed to clearly define their actual forest boundary on the ground. This has generally been due to poor hand-over procedures.

The forest is handed over to FUG management at FUG formation, but the actual boundary is not clearly specified at this time. In practice there is rarely a shared understanding of what is being handed over. Users rarely understand *exactly* what they are getting, because DoF staff rarely understand the current status of forest boundaries. DoF staff in the Koshi Hills rely on Cadastral maps which may be 20 years out of date, and are not easy to apply to the field reality. In all FUGs visited, the Range Post staff did not update the maps by resurveying the forest at the time of handover (which occurs as a matter of course in some other districts). Furthermore boundary disputes are not being addressed at this stage. Old boundary conflicts and encroachments are being passed from being the DFOs headache to being the FUGs headache, with no effort on the part of the forest department to resolve them

Lack of proper identification of the forest boundary is a serious problem for many FUGs as the ensuing boundary conflicts sap and dissipate the energy and momentum of the FUG. For instance in Helebung FUG, where no agreement has been reached with landowners over the actual forest boundary for years, replanting activities in the forest have been suspended. In Nakla Daskhate FUG the encroaching landowners are even undermining the legitimacy of the FUG amongst users, in an attempt to justify their land claims.

As if failing to resolve the existing boundary conflicts were not already a sufficient oversight, DoF staff in some cases created new conflicts at the time of handover. One instance was encountered of RP staff handing over a large part of a forest twice, to two different adjoining FUGs, as RP staff were unclear what has been handed over already (at Sibhuwa Salghari FUG).

The Cadastral map which is given at the time of forest handover is not only out of date but also unintelligible to the forest users. There is a need for more user-friendly maps which all members of the FUG can interpret. Enlarged photo-maps are a strong potential here, but even a local sketch-map, after a field tour would be more useful than the current Cadastral map to users.

One issue arising from poorly identified forest boundaries is that smaller patches of forest are being encroached without users knowledge. Many forests are not contiguous blocks, but include scattered patches. In the FUGs visited for this study most users knew the larger patches of community forest, but not the smaller patches adjacent to private agricultural land or to private forest, as they were not clearly defined. This is leading to their encroachment in 3 of the 11 FUGs studied.

The ‘official’ extent of the forest can be quite different from its actual size. For instance, Helebung FUG officially is 31 Ha but appears in practice to be closer to 20 Ha.

3.2.2 Effective Forest Protection

One of the main factors for the improvement in forest condition is effective forest protection. ‘Effective forest protection’ is interpreted to mean that the forest is protected through the enforcement of rules of use: i.e. rule-breaking is reducing and rule-breakers are punished.

In the study area there are three types of forest protection system in FUGs:

1. by paid watcher
2. by users taking turn to patrol
3. by all users watching forest, but not patrolling, and reporting rule-breaking to FUGC.

FUGs like Ramche and Patle Sanne have a good stock of forest resources, and have employed a forest watcher. The main role of watcher is patrolling forest, supervision, including tree marking and managing product distribution to user according to permit and keep record of harvested trees. In Sibhuwa Salghari a CF watcher is employed for three months during timber harvesting season to supervise and keep record of felled trees.

In most FUGs (8 of 11 studied or 73%) protection systems are apparently effective on these terms (from forest observation and users assessment). Illicit felling had largely ceased in all the FUGs studied.

Of the 3 FUGs where it is only moderately effective, in Paluwa Pikhuwa fuelwood collectors are ignoring restrictions they feel are unfair, though their extraction is not excessive, in Nakla Daskhate FUG users are grazing closed areas due to lack of awareness of the FUG regulations, and in Jalkini there has so far been a failure to impose regulations on product extraction. However even in these FUGs protection activities have reduced illicit felling and extraction, and fire damage.

A strong positive indicator of the level of participation in forest protection which have come from anecdotal discussion is that in all FUGs fire damage has, since formation, been minimal. Previously fire damage to forests was a major problem leading to a loss of forest products such as fuel wood and small seedlings. Without collective organisation individuals tended not to put out forest fires. Now FUGs can respond quickly when necessary and the wide use of forest watchers provides a better 'early warning system' than was available earlier. This was particularly evident in the second-phase field visits where in some instances the active participation of many FUG members (as well as the research team!) in fire-fighting was observed

3.2.3 Forest Condition Good or Improving

Perhaps THE key indicator of the success of Community Forest management is the condition of the forest itself. 'Good or improving forest condition' was one of the most frequently cited of all process indicators cited in tole meetings. . From analysis of study sites forests it is evident that at all FUGs studied the forest condition is generally improving, although there is a great complexity of situations on the ground.

Table 5.2 in Annex III indicates the condition and change in the forests at the study sites. The forest condition column, and change in forest condition represents a general characterisation, based both on the field observation of the foresters in the research team and the opinions of the local users, gathered from *tole*-level group discussions.

All community forests' condition are improving due to effective protection, a decline in illicit and unregulated felling, active forest management (i.e. clearing undergrowth, planting saplings, singling etc.), and regulating product extraction within sustainable levels. Improvement was generally recognised across all users in the FUGs. Many of the users had been very concerned at the deterioration of the forest resources on which they depended, and Community Forestry is recognised to have reversed that decline. This finding is a strong endorsement for the entire community Forestry processing Nepal. It shows that even though there are many weaknesses in different aspects of the process, overall the forest resource itself is undoubtedly improving.

This finding concurs with the Baseline Forest Resources Assessment study's findings of NUKCFP (Branney & Yadav (1998)). This study looked at the same area and found that 'Overall indications are that forest condition is improving – particularly in relation to the number and growth of young stems which, if present trends continue, will serve to regenerate the forest.'(p.48)

Whilst generally forests are improving there are some concerns about excessive pressure in particular areas of some Community Forests. For instance in Jalkini FUG there has been excessive extraction of good quality Sal trees for agricultural implements from the more accessible areas; leading to a localised deterioration in the forest composition.

The participatory resource assessment of the community forests studied generated detailed data as to the forest conditions.

Table 6.3: Status Of Regeneration (Seedling And Established Sapling) In Each Community Forest.

FUG:		Seedling (<4cm diameter) (# of Stems\ha)			Sapling (4-9.9 cm diameter) – (# of Stems\ha)		
		Good	Average	Poor	Good	Average	Poor
		>5000	2000-5000	<2000	>2000	800-2000	<800
1	Bhaludhunga	5502	-	-	-	1422	-
2	Jalkini Katlar	-	2408	-	-	-	693
3	Patle Sanne	11796	-	-	-	-	272
5	Ramche Sunkhani	7524	-	-	2443	-	-
6	Dharma Devi	-	-	1354	-	1357	-
7	Sibhuwa Salghari	6673	-	-	-	1610	-
9	Ahale	-	4708	-	-	1860	-
10	Paluwa Pikhuwa	6977	-	-	-	1128	-
11	Nakla Daskhate	-	3836	-	-	1195	-
13	Bokre Danda	-	4900	-	-	966	-
14	Helebung	-	-	1107	-	-	287

The quality and quantity of seedlings and saplings affects the sustainability of the forest. Data from the field survey, as presented in table 5.1.3, indicates all but 1 FUG have average or good regeneration characteristic in either or both Seedling or Sapling class.

In the case of Seedlings, 9 of the 11 FUGs studied are in good or average condition, whereas Dharma Devi and Helebung community forests are in poor condition.

Regarding the condition of sapling regeneration, 8 of the 11 FUGs have average of Good regeneration characteristics. In 3 FUGs, Jalkini, Patle Sanne and Helebung the sapling regeneration is poor.

A fuller picture of the forest condition in each FUG requires studying the forest by block.

3.2.4 Active Forest Management

From group meeting discussions users defined 'active forest management' as including two key aspects:

- planning of forest management by forest area or block
- performing activities specified in a plan consistently over time: such as plantation, godmel, nursery development, income-generating plantation, and utilising fallen and over-mature trees.

Immediately after formation most FUGs close their forests for regeneration, particularly if the forests are degraded. Gradually they move towards executing forest management activities. However only a small number make the critical step of adopting forest management *planning* procedures. The move from passive to active management methods happens at different FUGs at different speeds, but from the field study is clear that only those FUGs which adopt effective planning procedures achieve consistent and effective active forest management. Most FUGs attempts at active forest management are on an *ad-hoc* and erratic basis, which fail to realise the productive potentials of the forest. The Operational Plan does not fulfil the FUGs' needs for forest management planning.

Of the 11 FUGs studied only 3 had adopted active forest management (Dharma Devi FUG, Ahale FUG, and Helebung FUG) all of which are small compact forests.

The remaining 8 of the 11 FUGs studied did not have a clear conception of objectives, or a plan for their time bound implementation. There was not systematic active forest management. However there were forest management activities proceeding, such as '*godmel*' (thinning, cleaning, pruning) plantation, selective felling, etc, which indicated that FUGs were moving towards more active forest management. However these were often of an *ad-hoc* unsystematic and poorly planned nature. FUGs need support in developing planning procedures, and understanding the technical potentials for forest management. The basic concept of planning is lacking in most cases, and FUG forest management activities are ad-hoc. This doesn't imply that they are always poor and irregular, but the generally observed tendency was toward inconsistency and lack of strategic direction.

Table: 6.4: Users Participation in Silvicultural Operation and Benefit flow

FUGs	Operations Carried out by FUG				Product flow			Users Participation in	
	Thinning, pruning, cleaning (*godmel*)	Selective felling	Plantation	Weeding	Fuel wood (green)	Timber	Agri-tools	Silvi-operation	Protection
Bhaludhunga									√
Jalkini	√	√			√	√	√	√	√
Patle	√	√	√		√	√			watcher
Ramche		√			√	√	√		watcher
Dharma Devi	√	√			√	√		√	watcher
Sibhuwa	√	√			√	√	√	√	watcher
Ahale	√	√	√		√	√		√	
Paluwa Pikhuwa	√	√			√	√		√	user turn
Nakla Daskhate		√			√	√			user turn
Bokre Danda									√
Helebung		√			√	√			

In community forestry there are two main silvi-cultural practices:

- *'Ban godmel'* i.e. Thinning, pruning, singling, cleaning and removal of dead, diseased, dying and deformed trees.
- Selective felling of mature trees for FUG's need.

FUGs like Ramche, Nakla Daskhate and Helebung are concentrating on selective felling tree for users' requirement. Patle, Paluwa Pikhuwa, Ahale, Jalkini, Sibhuwa Salghari and Dharma Devi FUGs are operating both tending operation and selective felling.

A few FUGs have regularised tending operation for the improvement of forest (Dharma Devi, Ahale and Sibhuwa Salghari).

Presently users of Bhaludhunga and Bokre Danda are not extracting forest products except grass from forest, due to a lack of confidence of FUGC to mobilise users and manage the forest resources.

In Patle there are many mature pine trees which are not locally utilised for timber and fuel wood due a number of reasons. Pine timber is not suitable for local use due to termite infestation problem s. Provision of timber sale outside the FUG is lacking in the Patle OP, and there are difficulties in changing this.

A common problem for FUGCs implementing forest management activities such as *godmel* is difficulty in co-ordinating all the users who attend. This can be due to FUG Committees not having representatives from every tole: who could co-ordinate the respective members of their tole more effectively. More successful FUGs studied, such as Ahale FUG and Dharma Devi FUG, either use this method or pay poorer users to do the work.

3.2.5 Findings regarding Forest Management by FUGs

Although all community forests are under community management, the mistaken assumption of many of those external to FUGs tends to be that CF is being managed based on the FUG's Operational Plan. This is usually not the case. The specific objectives of FUG's forest management are usually not defined, which leads to FUG's lack of clarity over planning and organising their forest management activities. In most FUGs operational plans are not updated and group who have operational plan are not effectively putting them into practice. The associated issue of blocking is also misleading; most FUGs have divided their forests into blocks at the suggestion of the Range-Post staff, but only the few best organised are managing their forests on block-wise basis. Many FUGs are not even conceptually clear on the purpose of blocking.

FUG's practices often diverge from the OP&C, and they lack awareness how to revise the OP&C. Many FUGCs are not aware of the content of their OP&Cs even when they have been recently updated. Hence it is unlikely they will be able to implement them.

Due to the lack of active management in most cases forest resources are under utilised, considering the different product needs of user group. Each FUG has great potentials that could be realised by participating user in preparing plan and its implementation.

A proper forest management planning procedure requires that users needs from the forest are assessed, and compared with the forests potentials. These two aspects can then be harmonised into a forest management plan.

Forest Resource Assessment and Yield Regulation
There is a need for FUGs to assess their resource status. Currently FUGs try to control the extraction of forest products, with only a vague idea of the resource condition and productivity. This implies a likely imbalance leading to either under or over utilisation. Currently the yield regulation recommendations agreed by the DFO staff are of little use as they are approximated on the basis of vague estimation, and FUGs find them difficult to operationalise (i.e. harvest 400cft per ha. per year) – as it is impractical to measure all that is extracted. There is a need for more simple methods; perhaps on the basis of number of stems of different age group per hectare. If the total number of mature trees is known then annual extraction can be regulated. It may be that FUGs themselves can develop the most appropriate system for themselves, and this would be preferable to imposing outside ideas.

Blocking
Amongst most FUGs the perceived importance of block-wise rotational forest management and product extraction is lacking. This is because, although most forests has been divided into blocks, they have been divided by the FUG following the instruction of Range post letter, often without visiting the forest and taking account of the resource characteristics. There has not been proper discussion with the forest users to raise awareness of its importance. Hence in practice we observe widespread 'passive blocking', meaning blocks have been divided on paper at the request of the range-post, without considering or applying the concept of blocking in forest management practices.

Blocking details and silvicultural operations are not formally stated in the *old format* operational plans. In some cases (such as Jalkini Katlar, Nakla Daskhate, Helebung and Bhaludhunga FUGs) FUGs have *new format* operational plans, in which block wise operations are stated (to some extent), but FUGCs and general users alike are only partially aware of the importance of the operational plan, and this leads to its limited use.

Users' Needs Assessment
There is no proper users' needs assessment, understanding of what production possibilities exist in the forest, how these two might be harmonise, and how timber and non-timber forest products can be utilised effectively and wisely. For example, in Ramche and Sibhuwa Salghari (sites 5 and 7) Sal trees (valuable high-quality timber species) are being used for ploughs and fuel wood, other agricultural implements, poles, and even for ordinary wood requirements. Alternatives are available such as *Schima Wallichii* can be used for plough and by substituting them the FUG would preserve the Sal in order, in the future to take advantage of the high local market prices in the area for Sal timber. Here traditional use patterns are wasteful of timber, and limit the FUG's ability to increase their funds and to conserve the Sal forest. In the past there has not been the tradition of conserving the resource, as it was in plentiful supply, and only now has it become expedient to modify traditional practices to reduce waste.

Decision-Making
The low level of active forest management may also be attributed to decision-making difficulties: FUGs have tended towards the easiest management solution, which is to partially or fully close access to the forest. The example of Bokre Danda (site 13) is illustrative of this. Initially they had introduced a regulated fuelwood distribution system. After 2-3 years, the forest watcher they employed could no longer be paid from the fund, as it was empty. There were disputes over levels of firewood allocated. The solution found by the committee (most of

whom had private sources of firewood) was to close the forest and stop fuelwood distribution. In Ahale, on the other hand, the reverse has occurred. Initially the forest was closed for two years to regenerate, and subsequently a regulated fuelwood distribution system was introduced. It appears to be the case that if the FUG gains the confidence of the users over time more complex activities can be undertaken with consensus support.

Technical Issues
A problem for FUGs wishing to improve their forest management is that there is little technical support available. What is needed is planning of forest management to combine the needs of the users with the production possibilities of the forest. The DFO staff have little knowledge or experience of how to plan forest management for such complex production objectives, and where active forest management is occurring it has been a learning experience for all involved. Forest type and condition of different sites are different that lead to different level of managerial skills and input efforts. Ahale FUG does indicate that through experience FUGs can effectively forest management systems, but this takes time and outside support. Detailed operational plans need to be prepared through 1) participatory resource assessment, 2) commonly defined management objectives and 3) carefully selected management operations. Frequently FUGs practices differ from those mentioned in the FUG's operational plan.

Potentials of Forest Land Utilisation
Active management to achieve the desirable needs of FUG and also prevent forestland from degradation. As forestry is long term business to achieve the final product, which may not be the strong needs of user in that situation short term needs of FUG can be fulfilled through managing the available resource and intercropping other crop to generate short-term income to meet HH needs

Forest Patches Encroachment
In most sites studied small patches of forests under community forest management (e.g. ½ to 1Ha), especially those surrounded by agricultural land, were being neglected by the FUG. This is allowing some local landowners to take advantage of the situation to encroach on them. Where the authority of the FUG is not effective, and the process is weak they are not able to effectively challenge this encroachment. In some FUGs the total area can be as much as that of the compact block of community forestry forest. This is particularly apparent in Jalkini (site 2) where there are many small patches adjacent to farm-land, but is also occurring to a lesser extent in other sites (Patle (site 3), Ramche (site 5), Sibhuwa Salghari (site 7), Paluwa Pikhuwa (site 10), Nakla Daskhate (site 11), Nepale Danda (site 12), and Helebung (site 14)). Many users approached the research team during site visits to voice their concerns; for example to ask if the FUG can be given the authority to take legal control of these areas. The FUGs need to have their role clarified with respect to separate forest patches in their areas, as at present the general perception of is that community forestry refers to compact, contiguous blocks of forest.

4 Conclusions

The main findings of the Leeds / NUKCFP study are here summarised:

FUGs have become established local institutions. In virtually all FUGs the responsibility for decision-making befalls those in the village with most influence. Whilst this has been criticised as 'elite domination', only in about one fifth of FUGs studied was elite control of the FUG due to the deliberate or opportunistic intent of individuals to manipulate decisions in their interests. More often the most effective people become the committee members by default, often in response to problems besetting the FUG (such as boundary conflicts or lack of consensus across different groups).

Local people are in general very satisfied with the formation of FUGs, and the subsequent benefits from improved forest condition. There is widespread local agreement on the basic principles of Community Forestry, although there are voices of dissent over particular issues, and most serious of these are the concerns of poorer groups in some FUGs that their needs are neglected in decision-making. This can only be redressed through:

1. *Improved bottom-up planning and decision-making processes, based on tole-level discussion and tole-representatives in the FUGC.*
2. *Regular support visits from Range Post and other support staff, to ensure poorer groups are not being marginalised, and to facilitate their inclusion into decision-making processes.*

Evidence from research suggests Community Forestry had gradually brought not only direct benefits of improved product flows, but also wider benefits. Although many FUGs have been hesitant to mobilise their funds for non-forest related activities, recently many have started community development activities, such as credit facilities, trail-improvement, community-hall building, water supply provision and maintenance, support to schools etc. Some have also begun supporting literacy education and women's livelihood activities.

Regulations on product supplies may have reduced absolute level of offtake in some cases, at least for a transition period, but they have generally reversed the decline in the resource productivity, and so have laid the basis for increasing productivity in the future. Control of grazing has led to a move towards stall-feeding of livestock, in some FUGs this combines with the planting of improved grass varieties.

The Community Forestry process in Nepal is now at a crossroads. The CF regime emerged because of a crisis in the management of trees, and had little to do with livelihoods and socio-economic concerns. In the early 1990s the key concerns were getting the appropriate institutional form right, ensuring the FUG formation process was efficient and effective, and over whether FUGs could actually protect the forest resource effectively. Many FUGs have now been operating for several years, have become firmly institutionalised, and consequently the forest resources have generally improved. Through the grassroots social mobilisation which Community Forestry has entailed, FUGs now represent an effective local development institution increasingly involved in wider livelihood and community development activities, often networking with a range of different groups as well as the DFO; other FUGs, Village Development Committee and District Development Committees, Community Based Organisations, NGOs, other line agencies, even private companies

The initiative for Community Forestry had come from progressive policy makers and Department of Forestry staff. The success of Community Forestry, coming at the same time as an explosion of local development activity, has unleashed tremendous forces of social activism, and has meant that FUGs are now leading the process, and waiting for the DFO to catch up – in terms of post-formation support provision.

The success and popularity of Community Forestry presents a new dilemma for the Department of Forests. Whilst its responsibility as ultimate custodian of the forests continues, there are over its future role. Can it transcend the narrow sectoral constraints of its historical role? Can it facilitate, support and empower local communities, and the poorest amongst them, to make best use of the opportunities the FUG offers in their livelihoods. Can the DFO co-ordinate support to FUGs and their members according to their specific developmental needs? There are many promising signs that this progressive evolution in the Department of Forests' role is occurring.

4.1 Strengths of Community Forestry Process in Nepal

1. Local People can be the most effective managers of forests, given the right institutional arrangements and conditions.

The Leeds-NUKCFP research project found that the 'right institutional conditions' for successful forest management are:

- Participation based on an authentic sense of ownership / tenureship of the forest. The legal independence of FUGs helped this, although the DFOs rejection of some Operational Plan changes (e.g. to utilise over mature trees for timber) in some FUGs gave users the sense that it is really the DFOs forest.

- o Clear Formation procedures. The best performing FUGs are often those which have had a good start, in terms of identification of actual forest users, good awareness raising and inclusive decision-making, and clear definition of forest boundary.
- o Supportive / facilitative post-formation support and guidance from DoF.

Clear definition of boundary is particularly important in the context of Nepal, as there has been so much encroachment, and currently boundary conflicts are one of the main obstructions to FUGs functioning, at least in the Koshi hills districts studied. The formation process often gives FUGs forests on the basis of cadastral survey boundaries. These are out of date, as the forest boundaries have generally changes, and in many cases been encroached. This hands to FUGs boundary conflicts along with the forest.

Under these conditions, the local institutions can evolve effectively, and the FUGs move through a number of processes (discussed in depth in paper 2).

2. The local institution can most effectively and equitably promote and channel the energies of the local people through robust and inclusive planning and decision-making processes, based on hamlet-level interaction

CF has been criticised as a 'poor policy for poor people' (Graner 1999). We have found that CF can be a very empowering policy for poor people, but this crucially depends upon the nature of the planning and decision-making processes within the FUG. Local institutions reflect the nature of the local society in which they are situated. However they can also create a forum through which the weaker elements with the local society can express themselves and their wishes.

Because FUGs are new institutions they undergo a number of different developmental processes as they try to consolidate their functioning. Those FUGs that have consolidated their collective planning processes are most able to include consideration of the needs of the poorest.

- o The 'Community' in Community Forestry is a created community – the actual face-to-face community exists at the hamlet or tole level, and FUGs are constituted of a number of toles. It is at the tole level that planning can be based. Through the research an improved planning, decision-making and implementation process was identified – 'Micro-Action-Planning'… (discussed further in paper 4).

In order to promote this 'best practice' all that is needed is an outside facilitator – this can be a Dept. of Forest field-staff, or even an NGO or CBO facilitator.

Many of the more dynamic FUGs follow this sort of planning and decision-making process. However the formal DoF procedures have a more static orientation – focussed on following the Operational Plan as laid out at the time of formation, and modifying it as appropriate, ensuring he DFO approves changes before they are implemented.

Many Operational plans were drafted in haste during the formation process, often at the District Forest Office rather than in the field, and without proper planning and consultation. Some were even drafted on a standardised basis. Hence Operational Plans can be quite inappropriate to the forest and users in question. IN the intense pressure to form FUGs quickly this is understandable, but the necessity quickly arises within the FUG for the Operational Plan to be modified according to the local needs, and the changing state of the forest. In practice this is an excessively rigid and lengthy procedure – some FUGs who follow it can wait years to have their Operational Plans returned by the DFO. In fact many FUGs just manage their forest on a year-to-year basis decided at the General Meeting, often significantly diverging from the Operational Plan. Legally this breaks the agreement between the FUG and the DFO, but in practice the FUGs won't restrict their development to the static model provided by the Operational Plan and the rigidities inherent in trying to modify it.

If FUGs are to evolve on a sustainable basis with the Department of Forest's support, the DoF must change the monitoring process, to must help them by making the Operational Plan a

more flexible, dynamic, and Action-Oriented process… At present the best FUGs have more dynamic planning processes than envisaged under the Operational Plan, but without a structure they can be rather *ad-hoc*, albeit effective.

3. Support Relationships must be Need-Focussed and Demand-Led

In the early days the policy objective of Community Forestry was resource regeneration through conservative management, and so the Department of Forests carefully monitored FUGs to make sure they were doing this. As time has passed the forests generally have improved, FUGs have become more pro-active on their forest management and in community development. Although the Department of Forests has also evolved in internal culture and capacity, there is a gap between the support needs of FUGs and the ability of the DoF to support. The need for monitoring is reduced, but the need for technical support is increased. If the DoF is to continue to support the Community Forest process as it evolves, the DoF will need to evolve with it. Field support staff must play a facilitation role, and leave behind the policing role

The general body of users in most user groups are unclear over the basic concepts roles and responsibilities of Community Forestry. Hence awareness raising support is a widespread need.

Many FUGs need support in improving their Planning, Decision-making and Implementation processes (as discussed in paper 4). This can come in the form of group meeting facilitation.

Once FUGs have effective action-planning processes, they can pass their list of support needs to the Range Post, and other relevant agencies. District Forest Officers can then use these support demands as a basis for planning annual support act ivies according to each FUGs specific needs and wishes.

There has been a proliferation of development agencies, NGOs, CBOs in rural Nepal. It is essential that their efforts are co-ordinated to avoid duplication and ensure a cumulative impact on poverty. Through FUG Action-planning, other agencies can compliment the work of the District Forest Office, by fulfilling some of the support needs identified by FUGs where they have specific expertise (for instance micro-credit). DFOs can play the role of co-ordinating this support.

4. Community Forestry has beneficial impact on household livelihoods
It is clear that FUGs have reversed the 'institutional failure' by providing a local basis for forest regulation and management. This has generally reversed the deterioration of forest resources and placed forest product flows on a sustainable basis.

The patterns of impacts of community forestry on households' livelihoods are very complex, due to the diverse patterns of forest type, condition and livelihood-based forest use.

Concentrating on the poorest households:
- In a small number of cases some poor households are excluded from FUG membership, obliging them to either source their forest needs in other adjacent forests or break FUG rules. This issue reflects a poor formation procedure, and demands renewed support from DoF staff to ensure legitimate forest users are included.
- In a small number of cases fuelwood collection for sale by poor households has been made illegal in FUGs. However this has hardly affected the livelihoods of these groups as they generally continue to sell fuelwood, through gradually looking for livelihood alternatives.

In general poor forest users are satisfied' with FUG management of forests (62% of sample questioned)

A variety of livelihood benefits have begun to accrue to forest user households:
- Improved flows of forest products on a sustainable basis
- Improved social capital: the development of a local community planning institution

- Improvement in community infrastructure such as schools, roads and paths.
- Livelihood opportunities such as NTFP collection, credit facilities, social fund for emergencies

Not only are FUGs improving users livelihoods through forest management, but also through their wider community development activities.

4.2 Weaknesses of Community Forestry Process

There are a number of key areas of institutional weaknesses of FUGs, which require urgent attention.

FUG-level decision-making processes are crucial to determining the effect of CF, and as we have seen, in the majority of FUGs decision-making processed are weak and non-inclusive. Although poorer households are generally benefiting from the improved security of forest product flows, they are being marginalised from decision-making processes to some extent, leading to dissatisfaction and a sense that their needs are being ignored. Decision-making has tended to be dominated by the village elites and middle classes, and it has tended to be their interests which been articulated. Women are also not generally involved in FUG decision-making processes, even though their wishes are often different from men's.

The livelihood benefits to of the poorer groups and women therefore remain partial. For example poorer groups often depend on collection and sale of fuelwood, or production of charcoal, and it has often been these activities which have been de-legitimated in FUGs.

There are however major potentials for FUGs to support livelihood development for all their constituents, in particularly poorer groups; women, lower caste, and specific occupational groups. Gradually in the late 1990s, the shortcomings of the 'basic needs' approach have become evident in the light of recognition of the differentiated impact of CF policy in heterogeneous 'communities'. Due to concerns over elite domination of FUG decision-making 'gender and equity' issues have come to the fore in project support activities and sensitisation trainings District Forestry Office (DFO) staff. However CF policy still does not explicitly address livelihood or poverty alleviation issues. There have as yet been no explicit policy focussing on how livelihoods, particularly of poorer groups could be promoted through CF.

Conflict, particularly regarding forest boundary definition, and forest encroachment is a chronic problem in many FUGs, which requires urgent attention from the DoF, as it is often beyond the capacity of the FUG to cope with.

Over-extraction of some particular forest products has been an initial problem in some FUGs. Poor traditional utilisation practices of Sal felling for plough-shares has in some areas taken some time to regulate, and has eventually required specific regulatory measures.

Forest utilisation in many FUGs is sub-optimal: the forests could be managed to be more productive in terms of household needs and marketable surplus. This is due to both lack of awareness, lack of availability of time amongst users to participate, lack of support to train and encourage, and lack of market linkages as incentive.

FUG support structures are not providing sufficient level of appropriate support. The formal planning practices for the FUG as specified by the DoF are static and restrictive. The Operational Plan and Constitution are inflexible, very difficult to revise in practice, and do not serve forest users wider developmental priorities in any dynamic way.

4.3 Opportunities for Community Forestry Process

Improvements in FUG level decision-making practices are urgently needed to ensure the potential of CF for poverty alleviation is realised. Decision-making needs to become *tole* (hamlet)-based

Micro-Action-Planning, based on tole-level interaction, can shift FUGs into a dynamic self-supporting and demand-driven mode of development. Micro-Action-Plans from FUGs can help RP DoF staff to focus support planning on each FUGs specific needs.

There are many opportunities for economic development of FUGs and livelihood development for forest users themselves. Marketing support through support agencies, bilateral projects and apex organisations and networks could promote these.

FUGs need systematic need-based support: to raise awareness regarding CF concepts and procedures, to manage conflicts (particularly to endorse their legitimacy over forest boundary issues), and to facilitate improved decision-making methods. The DoF urgently needs to adopt effective resource planning methods, particularly at Range-Post level, to address these needs.

FUGs are already strengthening links with VDCs in some areas. There is great potential for co-ordinating development planning below ward level through the FUGs.

In future boundary disputes should be addressed at the time of FUG formation. FUG formation procedures have not addressed pre-existing boundary disputes, thereby passing on problems to newly formed FUGs which they are ill-equipped to deal with.

4.4 Constraints on Community Forestry Process

The main constraints on FUG development is the nature of the decision-making planning and implementation processes. Their improvement depends on the quality of the support structures, and the 'enabling environment' provided by policy.

FUGs are at a critical stage of development. A basic level of effectiveness has been reached in most. If the petty difficulties which are besetting many FUGs (such as boundary conflicts, OP&C revision etc.) are not to overwhelm them, or exhaust them much more systematic and regular Range-Post support relationships must be developed. Support should be on the basis of FUGs own priorities, to be articulated through Micro-Action-Plans. A key constraint is the use of the Range Post capacity.

Other support agencies could supplement this capacity. It has even been suggested by prominent NGOs that college students could be mobilised in the months after taking exams but awaiting the results, to raise awareness in FUGs.

4.5 Emerging Issues and Areas of Concern

FUGs reflect the nature of the society in which they exist; hierarchical and gender biased. Hence there are serious and justified concerns over the nature of the decision-making processes within FUGs. However FUGs are playing a catalytic role in creating a local forum enfranchising all to discuss issues on an ostensibly equal basis. Whereas previously marginal groups might have to take extreme measures (e.g. blacksmiths going on strike) there is now a forum for discussion and consensus-building.

Collective decision-making is a great challenge to FUGs, and the larger and more ethnically heterogeneous the greater the challenge. Forest User Groups have sometimes been accused of in fact becoming 'Committee Forestry' through processes of 'elite capture'. This study found that of a sample of 11 FUGs over two-thirds could be characterised as Committee or even 'Chairman' forestry, in terms of decision-making processes being dominated by the FUGC (for instance agenda-setting, lack of detailed discussions, ignoring of voices of women and poorer groups, bias to interests of particular toles etc.). However only two (under one fifth of the sample) were cause for serious concern over opportunistic conduct of the FUGC, which was indeed 'capture' of the FUG for their agenda. In the rest of the cases of 'Committee Forestry' there was a sense that the FUG was beset by problems, such as low awareness, lack of consensus across users, and conflicts, especially over forest boundaries. Under these conditions FUGCs are usually burdened with the responsibility to run the FUG by default as the most capable and powerful local people, and are generally doing their best to

hold them together from their level of understanding. More democratic and inclusive decision-making is far less challenging in small, ethnically homogeneous FUGs.

FUGs are addressing the need for collective decision-making as best they can under the circumstances. Improvements to decision-making processes are needed, and through the Action Research methods followed by the study, the Micro-Action-Planning process was developed as a model for improved decision-making. FUGs need outside support to promote improved decision-making practices of this kind.

Is Community Forestry a process which is actually progressing? From assessing the development of a number of FUGs we can say that some FUGs (about one third of our sample) are developing very successfully and are in a self-supporting mode. The remaining two thirds are at an earlier stage, and need outside guidance and support, to raise awareness, to resolve conflicts, to improve decision-making and inclusiveness, and to develop forest management activities. For these FUGs their support needs are not being met, and this is leading to a loss of momentum. Whilst many FUGs are moving into community development activities, they are still beset by problems like boundary conflicts, which dissipate the energy of the group.

FUGs are initially conceived as forest management institutions and are primarily oriented around these issues. Many FUGs have shown initiative in moving beyond this role to a wider community development orientation, and have had a major impact amongst users from such initiatives as drinking-water provision, credit schemes, even electrification. There is still a lack of confidence amongst some FUGs to develop in this direction, and hence a need for guidance and support.

At present the relationship of FUGs to Range Post staff remains ambivalent and falls short of what is needed. Range Post staff, in particular forest guards, are not working in an 'enabling environment' where there are incentives to developing constructive and supportive working relationships with FUGs. The outcome of lack of resource planning at the Range-Post is irregular and infrequent visits, where little is achieved and opportunities for awareness-raising and other support are lost.

Field visits by Range Post staff, on a regular basis, to coincide with Assembly of FUGC meetings, could form the basis of a stronger FD support for FUGs, for FUGs. Forest Guards need to play a key role in raising awareness of CF and facilitating improved planning and decision-making at FUG level. In order to do this they need to develop an equal and supportive working relationship with FUGs, and move beyond the policing and supervision culture traditional in the FD. Dynamism in Forest Guards and Range-Post staff needs to be encouraged by appropriate incentives and training. Lady Rangers, where selected for their maturity and group-facilitation skills, can play a valuable role in leading this energising of Range Post staff support role.

Bibliography

Arnold, JEM (1999) Managing Forests as Common Property Resources (IUCN)

Berkes, F (ed.) (1989) Common property resources: ecology and community-based sustainable development (Belhaven: London)

Berkes (1997) Linking Ecological and Social Sytems

Chapagain, D.P., Kanel, K.R. and Regmi, D.C. (1999) *Current Policy and Legal Context of the Forestry Sector with Reference to the Community Forestry Programme in Nepal - A Working Overview*, NUKCFP, Kathmandu

DFID (1999) *Shaping Forest Management* (HMG: London)

Gilmour & Fisher (1991) Villagers, Forests and Foresters (Sahayogi: Kathmandu)

Gilmour, D.A. and Fisher, R.J. (1991) *Villagers, Forests and Foresters*, Sahayogi Press, Kathmandu

Graner, E. (1999) *Political Ecology of Community Forestry in Nepal*, Freiburg Studies in Geography, Saarbrucken

Hardin, G (1967) The Tragedy of the Commons

Hobley, M. (1996) *Participatory Forestry: the Process of Change in India and Nepal*, ODI, London

Ives, J.D. and Messerli, B. (1989) *The Himalayan Dilemma: Reconciling Conservation and Development*, United Nations University, Routledge, London and New York

Netting, R (1981*) 'Balancing on an Alp: Ecological Change and Continuity in a Swiss Mountain Community*' (Cambridge University Press: Cambridge)

Olsten, Carsten Smith 1997 Commercial Non-Timber Forestry in Central Nepal: Emerging Themes and Priorities (Ph.D. Dissertation: Royal Vetinary and Agricultural University: Denmark)

Poffenberger, Mark (editor) 2001 Communities and Forest Management in South Asia (IUCN: Gland)

Solon L. Baraclough and Krishna N Gimire (1995) Forests and Livelihoods: The Social Dynamics of Deforestation in Developing Countries (UNRISD / Macmillan: Basingstoke)

Soussan, J.G., Shrestha, B.K. and Uprety, L.P. (1995) *Social Dynamics of Deforestation*, UNRISD (United Nations Research Institute for Social Development), Parthenon, London and New York

Springate-Baginski & Blaikie (2001) Community Forestry in Nepal: a Policy Review Centre for Water Policy and Development: School of Geography: Leeds)

Springate-Baginski, O, J. Soussan, OP Dev, NP Yadav, L. Kiff (2001) Community Forestry in Nepal – Progress and Potentials (School of Geography: Leeds)

Springate-Baginski, O., Soussan, J.G., Dev, O.P., Yadav, N.P. and Kiff, E. (1999) *Community Forestry in Nepal: Impacts on Common Property Resource Management*, Environment Centre, Leeds.

Springate-Baginski, O., Soussan, J.G., Dev, O.P., Yadav, N.P. and Kiff, E. (forthcoming) *Community Forestry in Nepal: Progress and Potentials*, Environment Centre, Leeds

Victor, M. *et al.* (eds.) (1995) Community Forestry at a Crossroads, RECOFTC (Regional Community Forestry Training Centre for Asia and the Pacific), Thailand

World Bank 1998-4 'Nepal - Poverty in Nepal at the turn of the twenty-first century' (World Bank: Kathmandu)

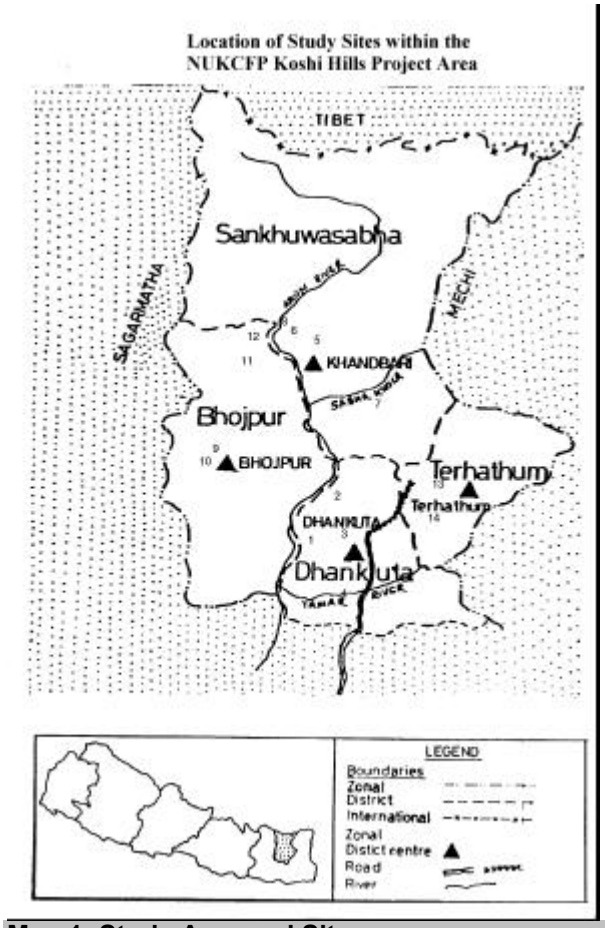
Institutional Development of Forest User Groups in Nepal: Processes and Indicators

Oliver Springate-Baginski, Om Prakash Dev, Nagendra Yadav, J Soussan

Acronyms

BJP	Bhojpur District
NUKCFP	Nepal UK Community Forestry Project
CF	Community Forestry
DFO	District Forest Office
DHK	Dhankuta District
DOF	Department of Forests (His Majesty's Government of Nepal)
FECOFUN	Federation of Community Forestry Users of Nepal
FUG	Forest User Group
FUGC	Forest User Group Committee
HMGN	His Majesty's Government of Nepal
IGA	Income Generation Activities
PMUML	Communist Party, United Marxist Leninist
RP	Range Post (local Department of Forest office)
SSB	Sankhuwasabha District
TTM	Terhathum District
VDC	Village Development Committee

About the Project:
'Community Forestry in Nepal: Sustainability and Impacts on Common and Private Property Resource Management' **University of Leeds / NUKCFP Collaborative Research Programme**
This paper presents findings from a 3 year research project, funded by DFID through its Natural Resources Systems Programme, and was undertaken by University of Leeds Environment Centre in Collaboration with Nepal UK Community Forestry Project, and NRI.
It investigated the fundamental processes involved in Community Forestry: FUG institutional development at the local level, their impacts on the forest resource, and on farming systems and livelihoods.
The research project ran over 3 years between 1997-2000. The project used a Participatory Action Research methodology, across 11 Forest User Groups (or FUGs), and 3 non FUGs, in 4 hill districts of the Koshi Hills Zone in Eastern Nepal. This involved group level discussions, participatory resource assessments, household interviews, and discussions with a variety of stakeholders at different levels.



Map 1: Study Area and Sites

The study sites were chosen to reflect the great diversity of physical and social and institutional conditions. Throughout this paper case study reference is made to these 11 FUGs, which are as follows:

14 sites were selected for study, involving 11 FUGs and 3 non-FUG sites for comparability, to reflect a variety of different characteristics: district, accessibility, forest area and type, forest condition, number of users, and age. These are shown in the following chart:

Table 2.2: Characteristics of Study Sites.

Site No.	Site Name	Dist-rict	Accessibility	Forest Area (Ha)	Forest Type				Forest Condition	Number of House-holds	Forest area / Household (Ha)	Year of FUG formation
					Pine	Katus-Chilaune	Sal	Other				
1	**Bhaludhunga**	DHK	Accessible	23.0	-	K-C	-	-	Fair	105	0.22	'96
2	**Jalkini Katlar**	DHK	Medium	213.5	pine		Sal	-	Poor	119	1.79	'93
3	**Patle Sanne**	DHK	Accessible	147.1	pine	K-C	-	Utis	Good	287	0.51	'94
4	**Chimsuwa (non FUG)**	DHK	Medium	-		-	Sal	Hade, Dangero	Poor	*64	-	'98-'99
5	**Ramche Sunkhani**	SSB	Accessible	129.1	-	-	Sal	-	Good	132	0.98	'92
6	**Dharma Devi**	SSB	Medium	10.0	-	K-C	-	-	Fair	53	0.19	'91
7	**Sibhuwa Salghari**	SSB	Remote	107.6	-	K-C	Sal	Utis	Good	117	0.92	'93
8	**Heluwa Besi (non FUG)**	SSB	Remote	-	-	K-C	Sal	-	Poor	*65	-	'98-'99
9	**Ahale**	BJP	Accessible	24.0	-	K-C	-	Utis	Good	69	0.35	'90
10	**Paluwa Pikhuwa**	BJP	Medium	104.9	pine	-	Sal		Good	121	0.87	'93
11	**Nakla Daskhate**	BJP	Remote	34.5	-	K-C	-		Poor	140	0.25	'95
12	**Nepale Danda (non FUG)**	BJP	Remote	-	-	-	Sal	-	Poor	*125	-	'98-'99
13	**Bokre Danda**	TTM	Accessible	31.0	-	K-C	-	Alnus	Good	188	0.16	'89
14	**Helebung**	TTM	Remote	31.5	-	K-C	-	Alnus	Fair	151	0.21	'93
	Mean:			77.9						135	0.58	

**Note: Estimated number of households for non-FUGs*

Accessibility was classed according to whether FUGs were less than 1 hour from District HQs (accessible), between 1-2 hours (medium), or more than 2 hours (remote) – a conventional approach in the Mid-hills.
Forest condition assessment was reached by both research team and forest users, according to density of stands, forest product availability and level of regeneration.

The method used was a 3 yr – action research approach incorporating biometric and participatory resource assessment

Summary

Forest User Groups have been formed in the middle hills of Nepal on a large scale since the 1980s to take responsibility for the management of adjacent forests. Their institutional development has analysed during this study, and a number of processes identified in conjunction with the forest users. This paper presents these processes and process indicators.

The assessment of user groups institutional development has allowed the research to distinguish patterns in their diversity, which are discussed in this paper.

Perhaps a quarter of FUG were highly dynamic. These FUG institutions were typically small (up to about 50 households) groups, with fairly good underlying cohesion, or cohesion emerging from successful conflict management. The households are likely to depend heavily on the small local forest about 30ha (of predominantly useful fuel and fodder species) having few other local supplies of fuelwood in particular, either due to a lack of sufficient on-farm resources and a lack of locally available alternatives. In cases studied these FUGs showed remarkable dynamism, and moved quickly from protection to active forest management, and on to wider community development activities. Decision-making was evidently equitable and inclusive, and decisions were being effectively implemented.

At the other end of the scale, just under a quarter of forest user groups have failed to be effectively institutionalised at the time of formation and so have consequently failed to 'take-off'. This is observed to be a problem where there is a lack of effective local leadership to drive the FUG forward and overcome obstacles, and a lack of common interest to manage the forest.

Between these two extremes lie most FUGs. Since most FUGs are 'constructed communities' - made up of a number of toles (hamlets) there are transaction costs to maintain awareness, communication and negotiation, and larger membership size and forest extent leads to more complex management challenges. Some of the larger user groups have been able to manage the forests effectively, due to strong leadership, high-value forest products and other fortuitous factors. But many have not been able to maintain the initial momentum or overcome the diverse managerial challenges.

Analysis of the processes of FUG institutional development teach us that post-formation support for FUGs is an ongoing need, which must be tailored to each FUGs stage of development, needs and objectives. A method to address this is developed in a separate paper on 'Tole-based Micro-Action Planning'.

This paper first discusses the use of process indicators in Community Forestry in Nepal. It then discusses the method used in this study. The different processes are then presented, and each one is analysed. An assessment is made of the performance of each FUG in terms of the process indicators identified, and general of Forest User groups is discussed. The paper concludes with a discussion of the policy implications.

1 Introduction

Community Forestry (CF) has spread across the mid-hills in Nepal over the 1990's due to the enabling policies, substantial donor support, and energetic implementation efforts by the Department of Forests staff to form local forest users into Forest User Groups (FUGs).

It is a truism to state that physical and social conditions in the mid-hills of Nepal are highly diverse. But it is relevant to re-state because, due to this social and physical diversity, FUG institutions themselves are highly diverse. Although they share a common legal basis, and common parameters they have widely varying physical attributes such as; age, size and type of forest, size of membership, economic activities, location / access, and ethnic diversity.

Beyond the diverse physical characteristics, there is also great variety in the character of the FUGs themselves: cohesion, decision-making practices and so on. Different FUGs have different formative experiences, and different priorities, and articulate the aspiration of the members in different ways. Hence different FUGs must be accepted as unique entities – each has unique site-specific circumstance. After formation FUGs evolve in a diversity of trajectories, subject to their specific conditions, particularly their formation process, ongoing support, wishes of users and local socio-political arrangement.

Is it possible to find some common basis on which to understand the development of the FUGs, in order that each FUGs unique development may receive appropriate tailored support? This paper proposes that it is. It presents a method which has been developed to do so, and the findings which emerged.

2 Processes and Process Indicators

To understand the actual processes of Community Forestry on the ground we must understand the views of the primary actors who are involved on a day-to-day basis: the forest users themselves. Throughout this research the views of the users themselves, as the primary stakeholders in CF, have been prioritised.

Community Forestry in Nepal is not just a one-time policy change, but has become an ongoing and evolving social development process, comprising a number of sub-processes, both within FUGs, and at other levels. In order to support this process, many bilateral projects including NUKCFP, have adopted an explicit 'process' approach themselves, changing their strategies in response to the evolution of the process on the ground. There is a desire amongst donors, DoF and other support agencies, and users themselves to understand and assess the progress of CF and FUGs.

Process indicators in CF may play the following roles:

- To promote FUGs self-consciousness and self-monitoring, and promote consensus-building and achievement of their collective visions
- To provide a basis for negotiating and communicating a shared understanding of the CF process, both within FUGs and between FUG and outside agencies
- To monitor development of FUGs and highlight their needs for support

A process indicator may be at best a tool to allow shared understanding and evaluation of processes:

> 'A major operational breakthrough of the last decade has been development agencies' increasing familiarity with and apparent use of qualitative indicators in the evaluation of social development. The basic principles that indicators should be unambiguous, consistent, specific, easy to collect are as valid today as they were when they were when first suggested by Caseley & Kumar in 1987.
>
> 'Outcomes and Impact' Oakley *et al* (98) p.66

Process indicators should be treated as a basis for understanding the process in some places where they are felt to be appropriate and desirable indicators, and for some period of time while they are felt to be relevant. They are not intended to be confused with the process itself, and so should not be interpreted as fixed or permanent measuring sticks of the process, and should not used to restrict the process itself. They need to be revised as the process evolves, and treated as only provisional.

Process indicators are often qualitative guides and depend on subjective evaluation. They are not to be seen or treated as qualitative targets. If forest users plan to work on improving particular aspects of their FUG they will need to create targets and objectives, and these may reflect processes and process indicators.

The development of process indicators is part of the process itself: process indicators are likely to be location-specific and time-bound. As the process moves on and FUGs change new indicators will emerge. For instance, in some FUGs their current priorities are conflict resolution and boundary definition. In others these issues have been settled and as the forest

has improved the question of product distribution and how to mobilise fund becomes the priority.

It may be possible to provisionally identify subjectively agreed processes within CF, and process indicators which may be used as a basis for assessing these processes at FUG level. However these indicators should only be treated as a starting point for discussion within each specific user group.

The indicators that have been identified as outcome of the action-research process of this study are not ends in themselves – but a stage in supporting FUGs to develop their own indicators. Process indicators are useful to FUG if they are practically used on regular basis as part of their planning cycle.

There is a danger that process indictors may be used as a 'command and control' tool to impose outsider's restrictive definitions and value-frameworks on the process, and hence on the forest users. Concerns have been raised that once identified, process indicators will be imposed on FUGs as a measure which FUGs have to live up to. This would be a mistake, as different FUGs must define their own priorities, according to their different circumstances and different stage of development. However this is of concern whilst there is an asymmetrical power relationship between the FUGs and DoF, and whilst the DoF plays an external monitoring role. Whilst the culture of the DoF has undergone great change there remains some residual control orientation, particularly due to interchange of staff between the mid-hills and the Terai, where participatory forest management is far less developed. To promote and consolidate the cultural change within the DoF in the mid-hills from control to support and facilitation it is essential that the DoF recognises the validity of the users' view-point, as expressed through their identification of process indicators. It is essential to ensure control of the specification of process indicators lies largely with the users themselves. All users must be involved, not just an unrepresentative elite who may have different concerns and interests, but marginal groups, the poor and women as well. Whilst general processes in CF may be agreed upon by users and other stakeholders, the choice of appropriate ways to measure those processes must rest with the forest users themselves.

The Department of Forests does have a legitimate support role to ensure FUGs are functioning properly and fulfilling their responsibility to manage forests sustainably, and to this end a degree of monitoring FUGs performance is necessary.

Outsiders may be looking for a set of indicators which allow for quantitative comparisons across FUGs, or for concrete signposts of the level of development of FUG; for instance up to date OP&C implemented. In practice users themselves (in this study) have tended to identify qualitative indicators, which rely on collective subjective approximations of achievement. Users themselves are far less concerned with what they might consider the 'official' requirements of the FUG, and more with subjective experience such as the sense of cohesion (or *man milne)* amongst users.

Marsden *et al* (1994) raise a number of questions relating to what form process indicators should take and how they should be used:

a) Indicators of both immediate outcome and longer-term impact of social development
b) How many indicators?
c) How to develop a set of indicators that satisfies a variety of stakeholders?
d) How will they be used?

Marsden, D, P. et al (1994)

The aim for process indicators should not be to seek a definitive list from which to score each FUGs performance, however appropriate or inappropriate they may be, but to support FUGs to define their own, considering their current situation and future vision, and to support their achievement. Hence in future the role of the DFO and bilateral projects could be to support FUG's own micro-action-planning and monitoring cycle.

Currently Range Post staff use their own standard list of indicators to assess FUGs. They sometimes visit FUG to check them, sometimes interview FUGC members at meetings, and

sometimes assess from memory. The main drawback of this system is that the assessment is not discussed with FUGs and is not according to FUG's own criteria. Instead range post staff have the following 5 broad categories, and within these altogether 32 subcategories:

- Social and institutional development (e.g. record keeping, assemblies held or not, committee meetings, participation of users, representation of different toles in committee).
- Information flow within FUG (e.g. notification & communication of decisions, date of activities and assemblies etc)
- Awareness and learning (e.g. regarding rights, roles and responsibilities of users, sharing of experiences)
- Skill development (e.g. sharing of learning from training, sharing of own knowledge of individuals, development of specific skills e.g. forest management, seedling production, record keeping)
- Forest management (e.g. blocking, planning of forest development activities, nursery, plantation, inter-cropping, yield regulation etc.)

In an annual DFO programme, DFOs in each district receives budget of Rs. 6,000 to award to the three best performing FUGs in the first, second and third categories: Most active (receiving Rs.3, 000), Medium activity (Rs. 2,000) and Low activity (Rs. 1,000) categories, based on DFO criteria as mentioned above.

The positive aspects of process are:

- These indicators are prepared and discussed and used by DFO and project staff.
- This process has created awareness in DFO and project staff of activities to be supported and monitored in community forestry
- In a number of districts (including Dhankuta) DFO staff have started to focus FUG support on basis of assessment from indicators – focussing on the less active FUG
- Monitoring has been proceeding for 5 years.

Shortcomings of current Range Post monitoring are:

- The list of indicators was identified to project staff and DFO staff rather than users.
- It is not be appropriate to apply all the general criteria developed by outsiders to the specific conditions in each FUG. Although there are similarities across FUGs, each user group is different (for example in terms of forest size and constitution, social composition and livelihood needs, geographical location, accessibility).
- This monitoring is owned by the DFO not the user group and so aims to fulfil DFOs objectives, not those of the user group.

NUKCFP FUG Health Check and Self-Monitoring exercise

As FUGs were not involved in the Range-Post monitoring process, the 'self-monitoring process' emerged. NUKCFP sought to initiate FUG Health Check', which gradually evolved into self-monitoring which was practised initially in Dhungedhara FUG. In the self-monitoring process the criteria for participatory assessment FUG are similar to the RP, although the process involves participation of users.

The Leeds / NUKCFP took account of these different areas of work on FUG monitoring in developing the analytical method used.

3 Tools for Identifying Processes and Indicators

A simple method was used by the Leeds /NUKCFP / NRI research team for facilitating forest users to identify the local institution's development processes, and process indicators. It was felt to be essential that forest users define for themselves their processes and process indicators, as they are the primary stakeholders in Community Forestry, and it is 'their' FUG .

Through structured group discussions, the users identified the processes of Forest User Group development, and suggested process indicators. This was done in two ways. Users, in small and large group meetings, were asked two open-ended questions:

1. ***'What are the main strengths and weaknesses of your FUG?'***
2. **'*What are the main indicators of a good FUG*?'**

From these discussions a variety of indicators emerged. Different tole-groups expressed different priorities. 'Strengths and weaknesses of the FUG' tended to represented the users' views of the FUG's current state, whilst responses to 'what are the main indicators of a good FUG' tended to represent the direction the users wanted their FUG to move towards. The 'indicators' go beyond just the current strengths and weaknesses and also reflect areas users felt to need improvement in the present state of the FUG, and in this way indicate users future vision for the FUG.

The aim to identify the *main* indicators in each tole, and so discussions were not exhaustive. In this way the main indicators across all FUGs were gathered whilst indicating particular focus in different FUGs. Hence many toles have not mentioned particular indicators, as they were not felt to be priorities, whilst they may be 'taken for granted'. Different FUGs have different concerns and priorities, and the indicators they cite reflect their current concerns and priorities, in a sense they show what they are aspiring to move towards.

When indicators were identified and agreed upon they then used as a basis to assess the state of the FUG in question.

These assessments reflect the state of the FUGs over the period of the study (i.e. both at the first and 12 months later at the second research visit). (At the first visit a Micro-Action-Planning process was performed, to identify actions the FUG could take to improve its operations and impact. Where these plans were effectively implemented the FUG's performance had improved by the second visit.)

After the fieldwork was completed the indicators collected across all the 11 FUGs studied were organised and grouped under general processes by the research team.

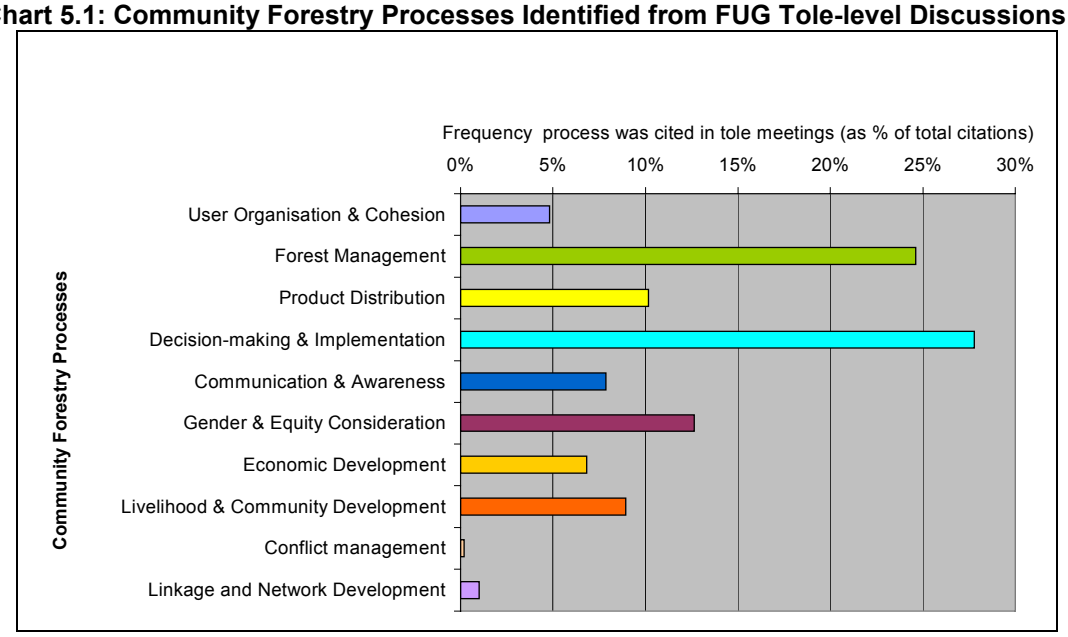
Whilst it possible to identify the general processes common to all FUGs, different FUGs have different circumstances, social composition and needs, and so have identified different ways of measuring their progress. It is neither practical nor reasonable to try to prescribe a list of indicators which fit to all FUGs.

4 Processes and Indicators for FUGs

Here the main processes and indicators – proposed by forest users themselves are presented and discussed, and issues of particular concern are highlighted.

Forest users' responses were edited and grouped according to the research teams estimation of the processes users referred to. The following chart shows the frequency of responses grouped according to processes identified:

Chart 5.1: Community Forestry Processes Identified from FUG Tole-level Discussions



The process indicators within these Processes are shown below, with an indication of how frequently each was cited.

The frequency of citation indicated how users feel about priorities of the FUG. In order of importance they are as follows:

Decision-making and Implementation: users emphasise that FUG decision-making should be inclusive of the wishes of all users, and over half of all tole-meetings indicated it should be based on tole interaction and discussion. Users also said that there should be active involvement in FUG activities and implementation of decisions – for instance in forest improvement.

Forest Management: users emphasise improvement in forest condition as key indicator of success of FUG, as well as effective protection and active management.

Gender and Equity Consideration: the necessity for involvement of women in FUG activities was strongly emphasised in group meetings.

Product Distribution: users emphasised the satisfaction of appropriate needs, and security and equity of forest product distribution are important indicators of the success of the FUG.

Livelihood and Community Development: users emphasised their wish that FUGs support household livelihood activities, for instance through micro-credit, skill-development trainings etc. To a similar but lesser extent users pointed to engagement in community development activities as an indicator of a good FUG.

Communication and Awareness: users' awareness of their roles and responsibilities was cited in a quarter of tole meetings as an important indicator of a good FUG. Good communication and information-flow systems were indicated.

Economic Development: users highlighted the active generation, transparent handling and mobilisation of the FUG fund. Users particularly mentioned fund mobilisation for household loans.

Linkage and Network Development: surprisingly far down the list, users identified the need for outside support and networking, with Forest Department staff, other line agencies, NGOs and FUG networks.

Conflict Management: the least frequently mentioned process was for conflict management and resolution.

The frequency the process indicators were cited reflects users priority concerns. The following table lists the process indicators identified, and how commonly they were identified. The main emphasis is on decisions-making and forest management. Network development and conflict management are not seen as central issues by many users, or may be seen as implicit in effective leadership functions.

Process indicators were not equally raised in different user groups: some mentioned others, whilst did not. Even within FUGs some toles mentioned some issues whilst others didn't.

Different FUGs identified different processes and indicators, as they are at different stages of development. Some FUGs at an earlier stage of development showed preoccupation with basic Forest management process and user organisation process (e.g. Bhaludhunga). Other FUGs with longer development move on to concern with community development process, as they have already attained certain level of success in forest management user organisation and decision- making processes.

These processes are effectively FUG-level processes, and may be seen as fitting within a wider set of Community Forestry processes at a national and regional level which might include creating an 'enabling environment' for them to flourish; particularly formation conditions, legislation for handover, support structures in DoF at different levels, legitimacy and endorsement to FUGs and so on.

Table 1 shows an assessment of each FUG studied, according to the process indicators identified. The assessment only a broad and indicative categorisation, and more detail for each of the issues is given in Appendix 2. The assessment is based on data gathered from field research, and in the light of user's own perceptions of their FUGs strengths and weaknesses.
The coloured stars within each box reflect assessment of the FUGs performance according to that indicator. The discussions on process indicators were not intended to be exhaustive, but rather to draw out the main indicators as perceived by the groups.

Chart 3.2: Community Forestry Process Indicators Cited in Tole Meetings

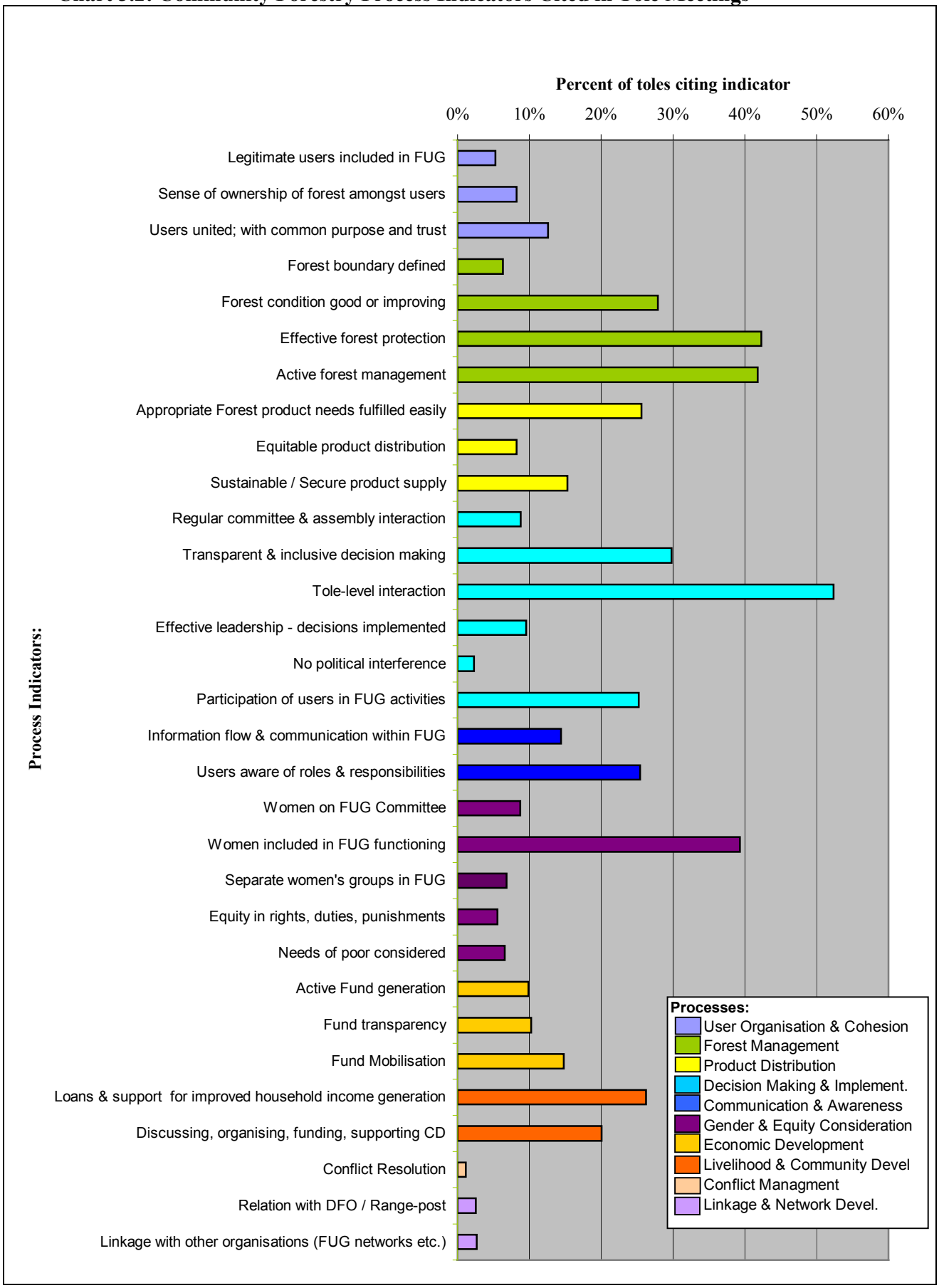


Table 3.3: Participatory Assessment of Performance of FUGs According to Process Indicators. ***Where performance has changed during study, both before and after assessments shown.***

Process	Process Indicator ***Key:*** ♦ - good ♦ - medium ♦ - poor	FUG: 1. Bhaludh	2. Jalkini	3. Patle	5. Ramche	6. Dharma	7. Sibhuwa	9. Ahale	10. Paluwa	11. Nakla	13. Bokre	14. Helebun
User Organisation & Cohesion	Legitimate users included in FUG	♦♦	♦	♦	♦♦	♦	♦	♦	♦	♦	♦	♦
	Sense of ownership of forest amongst users	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Users united; with common purpose & trust	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Forest Management	Forest boundary defined	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Effective forest protection	♦	♦♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Forest condition good or improving	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Active forest management	♦	♦	♦♦	♦	♦	♦	♦	♦♦	♦	♦	♦
Product Distribution	Appropriate Forest product needs fulfilled	♦	♦♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Equitable product distribution	♦	♦♦	♦	♦♦	♦	♦	♦♦	♦	♦	♦	♦
	Sustainable / Secure product supply	♦	♦	♦	♦♦	♦	♦	♦	♦	♦	♦	♦
Decision-making & Implementation	Regular committee & assembly interaction	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦♦	♦
	Transparent & inclusive decision making	♦	♦♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Tole-level interaction	♦♦	♦♦	♦♦	♦♦	♦	♦♦	♦	♦	♦♦	♦♦	♦♦
	Effective leadership - decisions implemented	♦	♦	♦	♦	♦	♦♦	♦	♦	♦	♦	♦
	No political interference	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Participation of users in FUG activities	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Communication & Awareness	Information flow & communication in FUG	♦	♦♦	♦♦	♦♦	♦	♦♦	♦	♦	♦	♦	♦
	Users aware of roles & responsibilities	♦♦	♦♦	♦	♦	♦	♦♦	♦	♦	♦	♦	♦
Gender & Equity Consideration	Women on FUG Committee	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Women included in FUG functioning	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Separate women's groups in FUG	♦	♦	♦	♦♦	♦	♦♦	♦	♦	♦	♦	♦
	Equity in rights, duties, punishments	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Needs of poor considered	♦	♦	♦♦	♦♦	♦	♦	♦♦	♦	♦	♦	♦
Economic Development	Active fund generation	♦	♦	♦	♦	♦♦	♦	♦	♦	♦	♦	♦
	Fund transparency	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Fund mobilisation	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Livelihood & Community Development	Loans, support for improved Hh income generation	♦	♦	♦♦	♦♦	♦	♦	♦	♦	♦	♦	♦
	Discussing, organising & supporting CD	♦	♦	♦	♦	♦♦	♦♦	♦	♦	♦	♦	♦
Conflict management	Conflict Resolved	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Linkage and Network Development	Relation with DFO / Range-post	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
	Links with other organisations (FUG networks etc)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦

Note: The assessment in table 2.4 refers to the condition of the FUG over both research visits. Where there are two marks, the first refers to the initial visit, and the second the subsequent visit, after the Micro-Action-Plan had been implemented. A shaded box indicate the FUG has identified the process indicators.

Note that the assessment of the FUGs performance against the indicators reflects a combination of mainly users' assessments, and also the research team. It is inevitably to a great degree subjective, although it may be taken as broadly indicative of the state of the FUG.

Note that the assessment refers to the FUG over the 12 months of field study – both phase 1 and phase 2 visits. Because of the Micro-Action-Planning process users identified aspects of the FUGs they wanted to change during the first visit, and where these action-points were implemented successfully the assessment during the second field visit 12 months later reflects this change. Hence in the table above some FUGs indicators have two points – reflecting the before and after Micro-Action-Planning situation. This will be discussed in greater detail in chapter 3 below.

4.1 FUG Institutional Development Processes

In each FUG, although strong commonalities emerged in the identification of processes and process indicators, slightly different indicators were highlighted, and different means of verification or measurement are appropriate depending on the particular circumstances of the FUGs. This reflects the fact that each FUG is unique, and must be treated as such. Not only are the FUGs initial conditions different in each, but the wishes the users have from the forest and so their wishes from the FUG differ. The main processes unfold at different rate for different FUGs.

Stages of FUG Development

If the FUGs perform basic activities (i.e. forest management) successfully, the FUG institution becomes more cohesive and more effective and develop their capacity for planning, decision-making. and implementation. This enables them to move to more ambitions and sophisticated activities. The level of complexity of the activities can increase, for instance more active forest management practices, community development activities and so on. FUGs may also strengthen linkages to outside organisations such as FUG networks,

Formation process

This initiates the development of the FUG- by starting the primary FUG processes: awareness of the concepts of CF is spread, the actual forest users are identified, the forest boundary is defined, and an operational plan for its management is drafted.

The quality of the process can fundamentally affect the future development of the FUG, and in most cases users express concern that the formation procedure was too fast and did not instil a good understanding of procedures, rights and responsibilities.

User Organisation and Cohesion

The actual forest users are not always accurately identified at the time of formation and it can take some time for this to be completed. Gradually, as collective decision-making proceeds cohesion can develop, although perhaps not if the interests of some toles come to dominate.

Forest Management

Initially most FUGs adopt passive forest management measures – that is closure of part or all of the forest for regeneration. If forest improvement occurs over time, gradually the FUG may move towards more 'active' forest management activities such as rotational block-wise management. However this can be a major challenge in FUGs with larger forests or memberships, and may not be effective.

Product Distribution

The FUGs regulate forest product extraction, in order to ensure forest use is kept to a sustainable level. During the initial period product extraction is often minimised and users are forced to find alternative product supplies, but as the resource improves product extraction levels can increase – and particularly where more active management is adopted.

Decision making and Implementation process
The key to successful FUG development is a healthy decision-making and implementation process. In man y FUGs this process is quite poor, for a variety of reasons, and too many FUGs represent 'Committee' or ‘Chairman’ Forestry.

Communication and Awareness
Gradually over time the users can become more aware of the Community Forestry processes, and more involved

Gender and Equity Consideration
In some FUGs, after a number of years of functioning deliberate steps have been taken to involve women, and to make provision for poorer members to pay lower levies, to receive more products, or to be allowed to collect fuelwood for market sale.

Economic Development
Over time many FUGs accumulate significant funds. A frequent problem for FUGs has been how to mobilise this fund. Users are often not clear on what they are allowed to use it for. In FUGs where funds are not mobilised there can be problems with financial irregularities. ON the other hand some FUGs have been very dynamic in employing their funds for community development activities. A key opportunity remains mobilising FUG funds for micro credit – a step that so far few FUGs have taken due to a lack of awareness and confidence.
There is an evident need for increased awareness of how fund can be mobilised, for transparency, improved hand-over procedures from old to new FUGC, and a more effective audit process

Community and Livelihood Development
As FUGs complete their basic operations successfully they often move towards wider community development activities.

So far FUGs have engaged in a variety of activities, including water and electricity provision, school building and improvement, and road-building.

For these activities to genuinely reflect the needs and interests of all the forest users and not just the elite, decision-making structures need to be inclusive.

There is a high demand amongst users for loan facility, although FUGCs hesitant to start. FUGs hesitant to move into Micro-finance - some are. - 'prudent' - but great demand & potential for benefiting poorest

Conflict Management
Many FUGs are beset by conflicts. Most conflicts are over the forest boundary and its encroachment – and have been latent from before the formation of the FUG. These conflicts can cast a shadow over the whole life of the FUG.

Only a small number of FUGs have been able to overcome conflicts by themselves. In these cases the FUG has grown much stronger and more cohesive through the experience. Where FUGs are not able to overcome conflicts, the support structures are generally failing them, leading to a deterioration in the FUGs dynamism.

Linkage and Network Development
As FUGs become more self-confident, many are forming links with different institutions, for instance FUG networks, VDCs, NGOs and CBOs, Line agencies. However the primary support agency the department of forests, remains seen as an unsatisfactory link – timely support and communication remains to be established with almost all FUGs.

What supports and obstructs FUG development?

FUGs tend to be effective where there is:

- Good awareness
- social cohesion (e.g. Dharma Devi, but not yet Paluwa Pikhuwa)

- Where users collectively regenerate forest - sense of ownership (Ahale, Dharma Devi)
- FUG fund mobilised for community development

FUG development processes may be obstructed in a variety of ways. The main obstructions found in the FUGs studies are lack of awareness, poor decision-making and conflict. However some FUGs are more able to overcome obstructions than others. For example, in some FUGs the resolution of conflicts had led to increased cohesion.

Conflict dissipates the energies of the FUG, and needs to be addressed urgently. FUGs usually need outside support for boundary disputes, and to date this is poorly supported by the DoF.

'Committee Forestry' (i.e. the control of the FUG by the Committee alone, without proper involvement of the users) often evolves in FUGs by default where they are beset by serious problems, such as poor awareness of procedures, lack of cohesion in large groups, and conflict. FUG Committees are commonly dominated by elites. Participatory decision-making procedures and practices, based on tole interaction urgently need to be introduced.

Many effective FUGs operate with little reference to their official Operational Plan and Constitution. Some successful FUGs don't even have a copy of their OP&C, due to the ineffective revision procedure at District Forest Office, when it may not be returned for years. FUGs need more a useful OP & C format and a faster revision procedure. FUGs also lack awareness regarding the proper OP&C revision procedure

Focussed support to FUGs is essential if they are to develop. The District Forest Office and Range-posts need to develop closer communication links with FUGs, to be kept informed of FUG support needs, and act on them through targeting support.
There is a high demand amongst FUGs for post-formation support– particularly help to develop institutional function of FUG and develop capacity. A fundamental need is the most basic awareness raising for both general users and committee members on concepts, rights, proper procedures, meeting facilitation skills and so on.

Other support systems are emerging, such as local FUG networks, for self-help.

Potentials:
Facilitate organic development of FUGs:
- Awareness raising and motivational visits - need not be Ranger - perhaps students / NGOs etc.
- Changing of OP&C format to a form appropriate to users, developed by FUGs themselves
- Potentials For Income Generations Through Community Forestry (Forest Based, On Farm And At Households Level
- Computerise the District Forest Office: to help Operational Plan and Constitution update, photomaps to improve handover/formation, GIS to monitor & support.

4.2 Typology of FUGs
From the sample of 11 FUGs across a variety of conditions, the process indicators chart allows us to identify four broadly characteristic groups of FUGs:

1. Small, cohesive effectively-functioning FUGs constituted of users highly dependent on forest, *(Dharma Devi FUG <site 6> and Ahale FUG <site9>)*

These FUGs have been highly successful in terms of regenerating the forest resource and providing a sustainable product flows. They have also moved into wider community development activities.

These FUGs benefit from 'ideal' initial conditions for collective action – they are small and relatively homogeneous – reducing the transaction costs of decision-making. They are also highly dependent on their forest, and so are highly motivated to manage it. The forests in both examples are compact and so easier to manage.

The FUGs cited were both quite close to district headquarters and had received a fair degree of support from the DFO and project staff.

In both FUGs cited successfully resolved conflict with outsiders had played a positive role in creating cohesion within the FUG.

2. Large, socially-diverse, effectively-functioning FUGs, with high value forest resource, able to manage forest effectively and share the significant benefits. *(Patel Sanne FUG <site 3> and Ramche FUG <site 5>)*

Where FUG leadership is robust, and FUGs receive sufficient attention and support from the DFO office, many FUGs are able to develop effectively. The value of the resource, the potential to realise significant benefits from it (i.e. both for domestic use and for revenue generation), and the need to protect it from unregulated extraction is a key motivating factor in these FUGs. Under these circumstances the motivation for collective action outweighs the disincentives of higher transaction costs.

Both the sites studied were close to district headquarters, which provides both closer supervision from the DFO, and more market opportunities and transport linkages.

3. Large ineffectively functioning FUGs beset by problems in decision-making and co-ordination: *(Jalkini FUG <site 2>, Sibhuwa Salghari FUG <site 7> and Paluwa Pikhuwa FUG <site 10>)*

Large FUGs are often beset by organisational difficulties, stemming for the problems of reaching agreement across a diverse social group with initially low social cohesion. Leadership opportunism and elite domination can exacerbate this situation. Where the resource is not high value, or not easy to gain immediate revenue from, and where forest product supply is not threatened by unregulated extraction, then there is less motivation amongst the users to invest time and energy in management.

4. Incompletely formed FUGs beset by problems *(Bhaludhunga FUG <site 1> and Nakla Daskhate FUG <site 11>)*

The worst performing FUGs are those where the formation process has not succeeded in achieving a sufficient level of awareness, organisation and cohesion amongst the users, and subsequently the FUG has failed to 'take-off' into effective functioning.

These serious problems generally stem from a rushed and incomplete formation process

Where the general body of users is not aware or motivated to participate in FUG decision-making and activities, and where leadership from the committee is poor then disregard for the FUG from various quarters lead to its deterioration. Some local leaders may encroach on forest land and set a precedent in village that the FUG lacks authority, and this precedent can be hard to reverse, leading to the opportunistic ignoring of forest protection measures and forest boundaries.

5 Policy Implications: Need-Focussed Support

The main policy implications arising from the indicators, and from the above typology are as follows:

Firstly a thorough formation process is vital for the long-term success of the FUGs. Where formation processes are poor the FUGs can fail to start operating altogether.

Secondly, effective monitoring of FUGs is needed – and where FUGs have problems, particularly in terms of lack of authority in conflict situations, they require urgent support, in order that they do not deteriorate further. From the identification of FUG institutional development processes it is clear that diffent FUGs evolve through these processes at

different speeds, depending on their circumstances. Hence FUGs needs for outside support depend on their specific circumstances and stage of development. Particular issues (such as boundary definition, conflict, and equitable product distribution) arise at particular stages of FUGs development.

It is essential that FUGs receive the appropriate support at the appropriate time if their development is not to be obstructed. This implies both flexible support network, and effective identification of needs within FUGs and effective and timely communication of needs to support networks.

Thirdly, in cases where large heterogeneous FUGs are suffering from factional schism, it may be best to split the FUG into smaller groups, as it is apparent that smaller FUGs are often able to function more effectively. Indeed in large FUGs suffering from internal decision-making problems, some toles actively request the DFO to split them

6 Bibliography

Marsden, D, P. Oakley, P and B. Pratt (1994) *'Measuring the Process'* (INTRAC: Oxford)
Oakley, P, B. Pratt and A. Clayton (1998) '*Outcomes and Impact*' (INTRAC: Oxford)

Annex: FUG Process Indicator Data

Table A2.1: Characteristics of Study Sites:

Site No.	Site Name	District	Accessibility	Forest Area (Ha)	Forest Type				Forest Condition	Number of House-holds	Forest area / Household (Ha)	Year of FUG formation
					Pine	Katus-Chilaune	Sal	Other				
1	**Bhaludhunga FUG**	DHK	Accessible	23.0	-	K-C	-	-	Fair	105	0.22	'96
2	**Jalkini Katlar FUG**	DHK	Medium	213.5	pine		Sal	-	Poor	119	1.79	'93
3	**Patle Sanne FUG**	DHK	Accessible	147.1	pine	K-C	-	Utis	Good	287	0.51	'94
4	**Chimsuwa (non FUG)**	DHK	Medium	-		-	Sal	Hade, Dangero	Poor	64*	-	'98-'99
5	**Ramche Sunkhani FUG**	SSB	Accessible	129.1	-	-	Sal	-	Good	132	0.98	'92
6	**Dharma Devi FUG**	SSB	Medium	10.0	-	K-C	-	-	Fair	53	0.19	'91
7	**Sibhuwa Salghari FUG**	SSB	Remote	107.6	-	K-C	Sal	Utis	Good	117	0.92	'93
8	**Heluwa Besi (non FUG)**	SSB	Remote	-	-	K-C	Sal	-	Poor	65*	-	'98-'99
9	**Ahale FUG**	BJP	Accessible	24.0	-	K-C	-	Utis	Good	69	0.35	'90
10	**Paluwa Pikhuwa FUG**	BJP	Medium	104.9	pine	-	Sal		Good	121	0.87	'93
11	**Nakla Daskhate FUG**	BJP	Remote	34.5	-	K-C	-		Poor	140	0.25	'95
12	**Nepale Danda (non FUG)**	BJP	Remote	-	-	-	Sal	-	Poor	125*	-	'98-'99
13	**Bokre Danda FUG**	TTM	Accessible	31.0	-	K-C	-	Alnus	Good	188	0.16	'89
14	**Helebung FUG**	TTM	Remote	31.5	-	K-C	-	Alnus	Fair	151	0.21	'93
	Mean:			77.9						135	0.58	

**Note: approximate estimation of user households*

Accessibility: Accessible: road access nearby and major Bazaar/ district HQ within 1 hour journey
Medium: major bazaar / district HQ 1-2 hours by track
Remote: major bazaar / district HQ over 2 hours by track

Table A2.2: FUG Formation and User Organisation and Cohesion (*Note: User Identification Issues identified through discussions with FUG members)*

FUG		Process of FUG Formation							Process of User Identification and Cohesion				
No	Name	Age (yr. at end 2056)	Forest deteriorating prior to FUG?	Initiative for Formation: Internal / External to FUG		Initiative for Formation: Comment	Duration of formation procedure	Users' assessment of formation procedure	All Actual Users Included?	Comment	Sense of Ownership of Forest	Users united	Comment
1	**Bhaludhunga**	4	Yes	-	External	• DFO wish to stop illicit felling	1 day	• Poor: *'too fast'*: DFO staff controlled	No	• Poor user identification at formation	Moderate	no	• poor awareness of CF from poor formation
2	**Jalkini Katlar**	7	Yes	Internal	-	• Users wish to conserve • blacksmiths demanded rights to charcoal	7 days	• Poor: *'mechanical'*: no proper debates	No	• Exclusion of some actual users: blacksmiths who need charcoal	yes	no	• Friction within users and between users and with chairperson
3	**Patle Sanne**	6	Not	-	External	• DFO initiated	5 days	• Poor: *'mechanical'*: no deep discussions	Yes	• User catchment covers large area, including 'future users'	yes	yes	• good sense of ownership and unity
5	**Ramche Sunkhani**	8	Yes	Internal	External	• Users wish to conserve • DFO initiated to stop illicit felling	Intermittent over 14 days	• Poor: *'mechanical'* : lack of tole meetings & user identification	No	• Secondary users from Bazaar influencing decision-making disproportionately	yes	no	• friction between users near forest and bazaar-dwellers
6	**Dharma Devi**	9	Yes	Internal	-	• Users wish to conserve & conflict with Jimmawals	7 days	• Poor: Awareness of process not spread	Yes	• Small number of users – had already identified themselves due to initial conflict	yes	yes	• good sense of ownership and unity: active participation
7	**Sibhuwa Salghari**	7	Yes	Internal	-	• Users wish to conserve	3 day	• Poor: *'hasty'*	No	• Exclusion of poor by school levy	yes	no	• users polarised between elites and poor
9	**Ahale**	10	Yes	-	External	• DFO / Project initiated - 1st in District	intermittent over 1 year	• Good: *'Thorough'*: awareness spread	Yes	• All users included	yes	yes	• good sense of ownership and unity. • Ethnic homogeneity
10	**Paluwa Pikhuwa**	7	Yes	-	External	• DFO / Project initiated	Intermittent over 14 days	• Poor: *'Too brief'* - no group discussions	Yes	• All users included	yes	no	• social friction; fuelwood sellers ostracised
11	**Nakla Daskhate**	5	Yes	-	External	• DFO initiated to protect plantation	Intermittent over 14 days	• Poor: *'Too brief to spread awareness'*: elites not involved	No	• Some actual users not identified	no	no	• Some users feel forest is to use but not protect. • Users far from forest not interested in FUG • Elites dissenting
13	**Bokre Danda**	11	Not	Internal	External	• DFO initiated - 1st in District: Previously panchayat forest	Intermittent over 3 months	• Medium: *'Thorough'* but no tole-meetings	Yes	• 'future users' (living far from forest) treated equally – problem in decision-making	yes	no	• Elites dominating decision-making • future users uninvolved
14	**Helebung**	7	Not		External	• DFO staff initiated • Previously Panchayat forest	Few days	• Poor: *'Hasty – short cuts'* no deep discussions	Yes	• Non-ward-5 users neglected in formation • Many 'future users', as there are no alternative forests for timber	yes	no	• Disagreements between toles; some feel neglected

Table A2.3: Process of Forest Management: Forest Composition, Condition, Protection and Management

FUG		Forest Composition						Forest Boundary	Forest Condition		Forest Protection		Forest Management Activities					
No	Name	(official) Area (Ha.)	Number of Blocks: Sal	Pine	K-C	Utis	Other common species	Boundary Defined?	Condition	Change in Condition	System:	Effective?	Active Block-wise Management?	Closure	Godmel	Nurseries	Plantation	Assessment of Forest Management
1	**Bhaludhunga**	23.0	-	-	3	-	Utis	Yes	Moderate	Improving	C: Users watch	Effective	Passive Blocking	-	Some cleaning	-	Bamboo plantation 50% success	• *Passive* • Users think CF = closure so forest use reduced
2	**Jalkini Katlar**	213.5	4	2	-	-	Chilaune	No: forest patches being encroached	Poor	Improving	B: User patrol by turn	Ineffective	Passive Blocking	-	Some cleaning	-	plantation (failed)	• *Passive* • Forest management ineffective
3	**Patle Sanne**	147.1	-	10	1	2		No: boundary encroachment conflict	Good	Improving	A: Watchers employed	Effective	Passive Blocking	-	-	2 nurseries	plantation	• *Passive* • resin system inherited • Nurseries supply fodder trees
5	**Ramche Sunkhani**	129.1	5	-	-	-	Chilaune	No: forest patches being encroached	Good	Improving	A: Watcher employed	Effective	Passive Blocking	-	Some cleaning	-	-	• *Passive* • godmel not effectively managed
6	**Dharma Devi**	10.0	-	-	3	-		Yes	Moderate	Improving	B: User patrol by turn	Effective	Active block-wise management	closure	thinning, singling	-	-	• *Active* • selective felling for timber
7	**Sibhuwa Salghari**	107.6	4	-	5	-		No: encroachment, and conflicts with adjacent FUG	Good	Improving	A: Seasonal watcher & C: users watch	Effective	Passive Blocking	closure	Some godmel	-	-	• *Passive* • godmel poorly managed
9	**Ahale**	24.0	-	3	4	2		Yes	Good	Improving	C: Users watch	Effective	Active rotational management	closure	thinning, pruning, singling	Nursery - selling seedlings	Plantation (effective)	• *Active* • Forest regenerated • Active fund generation • Poor users employed
10	**Paluwa Pikhuwa**	104.9	3	2	1	-		No: conflict over encroachment	Good	Improving	B: User patrol by turn	Moderately effective	Passive Blocking		Pruning, cleaning			• *Passive* • ad-hoc management, Sal-cutting banned
11	**Nakla Daskhate**	34.5	-	-	6	-	Patle	No: conflict over encroachment	Poor	Improving	B: User patrol by turn	Moderately effective	Passive Blocking	Closure (ineffective)			Amriso / cardamom plantation failed	• *Passive* • Management ineffective: illicit grazing & felling unpunished. Plantation failed
13	**Bokre Danda**	31.0	-	-	1	3		Yes	Good	Improving	C: Users watch	Effective	Passive blocking	closure				• *Passive* • Forest closed: FUGC lack confidence, plan or objectives
14	**Helebung**	31.5	-	-	2	1		No: forest patches being encroached	Moderate	Improving	C: Users watch	Effective	Active Block-wise management	rotational closure	thinning, pruning			• *Active* • selective felling for fuel wood and some timber.

Forest condition assessment based on forest age, canopy density, and amount of regeneration.
'Effective forest protection' means that rules are enforced: both rule-breakers are apprehended and punished, and that rule-breaking is discouraged and reduced. Evaluation of effectiveness of forest protection made through group-meeting discussions and forest observationClosure means forest closed for grazing and product collection, other than dry fuelwood (from forest floor). 'blocking' means the forest has been divided into separate blocks to facilitate rotational management as appropriate.

Table A2.4: Forest Product Extraction and Utilisation Status

FUG		Forest Products being extracted						Product Distribution Systems			
No	**Name**	**Fuel wood**	**timber**	**poles**	**plough**	**Grass etc.**	**Other**	**System**	**Appropriate needs easily fulfilled?**	**Equitable?**	**Sustainable?**
1	**Bhaludhunga**	Fuel wood	-	poles	-	grass	-	• No system: due to poor awareness most people treat forest as closed. Only households close to the forests collect products	• Yes: generally low dependency on forest	• Moderately	• Yes
2	**Jalkini Katlar**	Fuel wood	timber	poles	plough	grass	charcoal, Sal leaves	• In practice unenforced regulation and little control, other than timber – only loosely enforced. Free plough collection and fuelwood Now tole-subcommittees formed to manage more effectively.	• No: For some, but not for poorer groups e.g. regarding charcoal, timber	• No: discretionary - rich get most timber – poor dissatisfied. • New more equitable system introduced	• Uncertain – future supply of Sal for agricultural implements uncertain – but measures being taken
3	**Patle Sanne**	fuel wood	timber	-	-	grass	resin	• Timber distribution by application	• Yes: low dependency	• Yes: employment benefit to poorer users	• Yes
5	**Ramche Sunkhani**	fuel wood	timber	poles	plough	grass	Sal leaves	• Tole subcommittees issue Permit annually for timber and plough needs from Sal and allocate deformed trees as well as straight. Surplus is kept in depot.	• Yes: all users needs fulfilled	• Moderately. *After Micro-Action–Planning special provisions for fuelwood sellers introduced*	• Uncertain: regarding future Sal supply for agricultural implements: extraction of straight trees had been excessive. *After MAP improved utilisation measures introduced*
6	**Dharma Devi**	fuel wood	timber	-	-	grass, bedding	-	• Good Fuelwood distrib. system by lottery. Little timber distrib.	• Yes: users very dependent	• Yes: 'equal' system for users similar needs	• Yes: carefully judged
7	**Sibhuwa Salghari**	fuel wood	timber	poles	-	Grass, leaf-litter	-	• poorly regulated system of fuelwood and timber royalty,: some timber sold in bazaar	• No: rates prohibitive to poorer users	• No: Timber royalty (and membership levy) too high for poor	• Yes, though localised overextraction of Sal for timber & plough
9	**Ahale**	fuel wood	-	-	-	grass	-	• fuelwood distribution on wealth / needs assessment	• Yes	• Moderately: *after MAP explicitly equitable system introduced*	• Yes
10	**Paluwa Pikhuwa**	fuel wood	-	-	plough	grass	-	• Fuelwood for royalty, poorly regulated	• Yes: allowance low but collected illicitly	• No: fuelwood sellers (poorest households) can't afford royalty	• Yes: excess felling of Sal controlled
11	**Nakla Daskhate**	fuel wood	timber	-	plough	grass	grazing	• timber by application; in practice unregulated extraction; grazing not controlled	• Yes: little regulation: users' needs met	• Moderately: generally equal system, but elite taking more timber	• Uncertainty over timber supply – many good trees being felled
13	**Bokre Danda**	-	-	-	-	grass	Berries, medicinal herbs	• Forest closed for fuelwood and timber due to previous problems regulating extraction	• No: poor are without good alternative fuelwood supply	• No: poor have few alternative sources of fuelwood & timber. Previously elites favoured in timber allocation	• Yes
14	**Helebung**	Fuel wood	timber	poles	plough	Grass, bedding	grazing	• 30 bhari limit for fuelwood. • Timber allocated by tole representative.	• Yes	• Moderately –'equal' system	• Yes: users exercise responsibility in not over-extracting

Table A2.5: Decision-Making and Implementation

FUG		Regular Interaction			Decision-making		Leadership		Participation	*Assessment of Decision-Making*			Comment
No	Name	FUGC	Assembly	Tole Level	Transparency	Inclusiveness	Effective: Decisions Implemented?	Free from Politicisation?	Users participation?	*Elite-dominated FUGC?*	*FUGC-dominated decision-making*	*Chairman / Committee / Community Forestry*	
1	**Bhaludhunga**	No	No	Poor	Poor	Poor	No	No	Poor	*Yes*	*Yes*	*Committee*	• FUGC & Assembly meetings irregular and poorly attended Quorum not reached for assemblies. Meetings held in bazaar not village, as several of the FUGC members not local forest users. • Poor leadership in FUG
2	**Jalkini Katlar**	Yes	Yes	Poor	Poor	Poor	No	No	Moderate	*Yes*	*Yes*	*Chairman*	• Politicised autocratic chairman with political ambitions monopolises workload & decision-making process. • Low meeting attendance due to chairman's autocratic manner: though users beginning to challenge chairman.
3	**Patle Sanne**	Yes	Yes	Poor	Good	Moderate	Moderate	Yes	Good	*Yes*	*No*	*Community*	• All users involved in meetings and decision-making –though women feel less involvement • Users have great faith and respect for their FUG chairman
5	**Ramche Sunkhani**	Yes	Yes	Some	Good	Moderate	Moderate	Yes	Moderate	*Yes*	*Yes*	*Committee*	• Agenda-setting by FUGC • Women & poor feel marginal to decision-making process.
6	**Dharma Devi**	Yes	Yes	Some	Good	Good	Moderate	Yes	Good	*Yes*	*No*	*Community*	• All users involved and active, as all highly dependent on forest. Small homogeneous group – good cohesion. Still problems implementing decisions
7	**Sibhuwa Salghari**	Yes	Yes	Some	Poor	Poor	No	Yes	Moderate	*Yes*	*Yes*	*Committee*	• FUGC setting agenda and often ignoring assembly decisions. FUG dominated by elites, all from Sahu tole. • Poor toles wish to split FUG in order to have better control of forest near them
9	**Ahale**	Yes	Yes	All	Good	Good	Yes	Yes	Good	*Yes*	*No*	*Community*	• All users involved. Small homogeneous group – good cohesion
10	**Paluwa Pikhuwa**	Yes	Yes	Some	Good	Moderate	No	Yes	Moderate	*Yes*	*Yes*	*Committee*	• Leadership 'laissez-faire': not effective: Disagreement amongst FUGC members. Not resolving conflicts in FUG. • Poor users feel regularly overruled in assemblies
11	**Nakla Daskhate**	Yes	No	Poor	Moderate	Moderate	No	Yes	Poor	*Yes*	*Yes*	*Committee*	• Quorum often not reached – then FUGC take decisions • Previously weak / corrupt FUGC had led to disaffection of users • Local VDC leaders more powerful: influencing users against FUG
13	**Bokre Danda**	No	No	Some	Moderate	Moderate	Moderate	Minor	Moderate	*Yes*	*Yes*	*Committee*	• Meetings poorly attended: Decisions taken reflect interests of wealthy: FUGC members have own land and don't want to open forest–poor users suffer. • FUGC members lack time to contribute in village; thus FUG weak • Chairman and vice-chair disagree: from different political parties
14	**Helebung**	Yes	Yes	Poor	Good	Moderate	Yes	No	Moderate	*Yes*	*Yes*	*Committee*	• Decisions tend to reflect interests of wealthy and ward 5 tole. • women hardly involved as yet • Despite political factions in FUGC most decisions implemented: strong leadership, but repetition of decisions (e.g. rate-setting) in meetings.

Transparency and inclusiveness – qualitative assessment from tole and household meeting

Table A2.6: Processes of Communication and Awareness, and of Gender & Equity Consideration (*Assessment from group meetings and hh interviews)*

FUG		Communication and Awareness			Gender				Equity		
No	Name	User awareness of roles/ responsibilities	Communication & Information flow	Comment	Women in FUGC	Women's involvement in FUG functioning	Separate women's groups	Comment	Equity in rights, duties punishments	Needs of poor considered	Comment
1	**Bhaludunga**	poor	poor	Lack of awareness amongst users due to hasty formation	2	poor	moderate	• 2 women's groups formed by WDO - livestock development	no	no	• FUG barely active
2	**Jalkini**	poor	poor	• Poor understanding of CF concepts and procedures amongst users and FUGC	-	poor	no	• Women's participation not encouraged	no	no	• Chairperson favouring wealthy friends – e.g. by ignoring excessive felling for timber, and fuelwood sale by teashop owners. • Poor groups' needs ignored, some excluded
3	**Patle**	moderate	moderate	• Users vague on CF concepts and procedures, esp. Poorer groups • Comm. through word of mouth and Assembly	-	poor	yes	• Low awareness & involvement of women • Animator supporting women's group (e.g. Literacy)	yes	no	• Equitable and fair practices in FUG • *MAP: Fund allocated for loan to poor groups*
5	**Ramche**	moderate	moderate	• Users aware of regulations but CF process not understood • Communication through tole rep.s	1	good	moderate	• High motivation and awareness of women • CF animator supports women's groups	yes	yes	• Equitable and fair practices in FUG: • Concessions for fuelwood sellers • *MAP: Fund allocated for loans to poor Hhs*
6	**Dharma Devi**	good	good	• Good awareness due to high dependence on forest • Comm. through tole rep.s	2	good	no	• Most women attending assembly meetings	yes	yes	• Equitable and fair practices in FUG • Fuelwood sellers allowed to continue under regulations
7	**Sibhuwa**	poor	poor	• Most users not aware of CF process • No formal comm. System	-	poor	moderate	• Low awareness & involvement of women • *MAP: Women's groups formally initiated*	no	no	• FUG polarised between rich and poor • Poor excluded for not paying levy for school • Poor dissatisfied; consider splitting FUG
9	**Ahale**	good	good	• High level of awareness • Tole representative and letter	3	good	yes	• High level of awareness and participation from women	yes	moderately	• *MAP:Highly equitable practices in FUG* • *Special need-based product distribution* • *Special provision of loans to poor Hhs.*
10	**Paluwa**	poor	poor	• Most users lack conceptual understanding of CF • No system of communication	3	poor	no	• Women not empowered, or encouraged to attend meetings	no	no	• Poor groups feel left out • Restrictions on fuelwood sellers and no support to change occupation
11	**Nakla**	poor	poor	• Users lack awareness • No system of communication	1	poor	no	• Women not encouraged to participate • Forest guard's wife on FUGC	yes	no	• No special provisions for poor
13	**Bokre Danda**	poor	moderate	• Users and new FUGC lack awareness, (poor FUGC handover process) • Comm. through tole rep.s	-	poor	no	• Women not encouraged to participate	no	no	• Poor groups feel inequity in FUG decisions – forest is closed, but wealthy have private resources they can use instead.
14	**Helebung**	moderate	moderate	• Moderate awareness amongst users from formation • Comm. through tole representatives	-	some	no	• Women not encouraged to participate in meetings • Separate women's meeting held by FUG network	no	no	• Ward 5, and Bahun and Chettri caste groups dominate: others feel neglected • No special provisions for poor

Table A2.7: Processes of Economic Development, and of Livelihood and Community Development

FUG		Fund Level (Rs.) in 2056	Fund Source			Active fund-generation?	Transparency	Embezzlement / irregularities	Fund Mobilised?	Credit for Poor?	Comment	FUG Support to Community / Other Organisations
No	Name		Royalties	fines	other							
1	**Bhaludhunga**	5,000	-	fines	-	-	moderate	-	-	-	-	-
2	**Jalkini Katlar**	17,000	royalties	fines	-	-	yes	-	• Nursery man salary • plantation	-	-	• Awards given for students of local secondary school
3	**Patle Sanne**	233,000	timber royalties	-	resin	yes	yes	audit provision	• Community development • *MAP: Fund allocated for poor IGA*	-	• *Funds allocated for household IGA for poor through Micro-Action-Planning process*	• Donation to schools, local youth clubs, & Agriculture group building • Drinking water system installed • Electricity programme initiated
5	**Ramche Sunkhani**	94,000	timber royalties	fines	-	moderate	poor	audit provision	• Built meeting hall • forest watcher salary • *MAP: fund for poor IGA*	-	• *Allocated fund for micro-credit to poor households for IGA through Micro-Action-Planning process* • Self-funded saving and credit group planning to borrow from FUG fund	• Donation to school & to bridge construction • Land purchased and community hall built in village
6	**Dharma Devi**	27,500	royalties	-	levy	moderate	yes		• Allocated to buy land to plant forest • loan for IGA • forest-watcher salary	Yes	• Credit given to individuals for HH IGA (e.g. livestock)	• Organising to buy land to develop new forest area
7	**Sibhuwa Salghari**	10,000	royalties	-	levy	moderate	poor	embezzlement by previous FUGC – not yet clarified	• loan (only with collateral) • support to school	-	• FUG behaves like a money-lender; lends on collateral at 24% p.a. If borrower can't pay deposited assets auctioned. • Poor cannot get loan: don't have collateral.	• Financial and timber support to school • *MAP: move to build Community Hall*
9	**Ahale**	50,000	royalties	-	nursery profits	yes	yes	Minor irregularities - clarified	• loan for poor IGA • fuelwood harvesting employment for poor	Yes	• Giving loan to users on a small scale for household income generating activities such as goat and pig keeping. *This has become formalised through Micro-Action-Planning process*	• Trail-making • Timber support for monastery construction
10	**Paluwa Pikhuwa**	46,431	royalties	fines	-	-	yes		-	-	• No vision, objectives or planning	-
11	**Nakla Daskhate**	4,557	royalties	fines	-	-	poor	Poor record-keeping; Previous embezzlement: not clarified	• Cardamom plantation	-	• No vision: unclear objectives	• Timber support to health-post, and VDC
13	**Bokre Danda**	7,000	royalties	fines	-	-	poor	Embezzlement by former FUGC	-	-	• No vision, objectives or planning	-

14	**Helebung**	5,800	royalties	fines	-	-	poor	Irregularities – Rs.2500 with previous treasurer	• Trail-making	-	• No vision, objectives or planning • Financial support to trail-making

Table A2.8: Process of Conflict Management

Site	Name of FUG	Types of Conflicts in FUGs:					Types of Conflict and status
		Sub-groups within FUG	Individuals / FUG	Committee / FUG	Individuals Within FUGC	FUG / Outsiders	
1	**Bhaludhunga**	-	-	-	-	-	• Little conflict
2	**Jalkini Katlar**	Over-extraction	Over-extraction	-	Personality clash	Product use	• Over-extraction conflict between sub-groups and between individuals and users regarding use of timber, plough-shares, and fuelwood. Many users feel there is overextraction of good Sal for timber and agricultural implements. Tea-shop owners are taking much fuelwood and selling fuelwood on trail, but not being reprimanded. FUG not distinguishing subsistence and commercial use of forest. Poor group feel their voice is ignored and are considering applying to DFO to split FUG in order to have more control over forest. • Personality clash in FUGC and in general body of users with autocratic, politically-motivated, and biased leadership style of FUG Chairman • Product use conflict with outsiders (blacksmiths) who have been excluded from FUG membership but are traditional users of forest and need charcoal
3	**Patle Sanne**	-	Boundary	-	-	-	• Forest Boundary dispute – has been in court for 15 yr. – an old problem with the Vice-chairman of FUG, claiming forest as private – from Jimmawal era. FUG has not taken initiative to resolve.
5	**Ramche Sunkhani**	-	Boundary	-	-	-	• Forest boundary not clear. FUG does not have clear boundary map but is trying to define boundary as handed over. Some individuals are claiming and trying to register some Community Forest land adjacent to their agriculture land.
6	**Dharma Devi**	-	Embezzlement	-	-	-	• Conflict over loan pay back: but now individual is ready to pay. • Previous conflicts: 1. At formation Jimmawals claimed forest: users asserted themselves with DFO support. 2. Outsiders stealing; gradually stopped
7	**Sibhuwa Salghari**	Dissent	Boundary	Embezzlement	-	Boundary	• Dissent of poorer toles against elite domination: decisions of FUGC favour elites: i.e. school levy, timber sale: poorer toles inclined to split FUG. • Boundary conflict with individuals claiming small patches of CF adjacent to farmland. • Fund embezzlement by former committee. Present FUGC trying to take back money from former chairman. • Boundary conflict with neighbouring FUG over two forest blocks which RP staff handed over to both of them.
9	**Ahale**	-	-	Embezzlement	-	-	• Embezzlement conflict: Treasurer had used fund as private loan facility for 1 year. Collective action in conflict resolution exists in the FUG: through assembly issues resolved. Treasurer apologised, resigned and agreed to pay interest. • Support system available – especially through the Bokhim VDC Network and VDC leaders.
10	**Paluwa Pikhuwa**	Overextraction	Boundary	-	-	-	• Over extraction conflict: Fuelwood sellers ignore restrictions as they have few livelihood alternatives. Now number is reducing, and extraction level in fact sustainable. • boundary dispute with Jimmawals who are claiming part of CF as their private forest. Most encroachers accept they are encroaching; the issue is not defining the boundary but enforcement. The DFO needs to prosecute, at the time of revising the OP&C. To formalise land ownership a sketch should be made of each plot in the forest with the number and name of each trees; signed and agreed, to end further argument. • The conflict is de motivating the FUGC, and demotivating other forest users from observing the regulations
11	**Nakla Daskhate**	-	Boundary, Personality Clash	-	-	Personality Clash	• Boundary conflict: Individuals claiming CF areas adjoining private land • There is conflict and mistrust with former Jimmawals and VDC chairman. These elite powerful people, who are also encroachers, are not recognising the legal authority of the CF, and encouraging FUG members to do the same.
13	**Bokre Danda**	-	-	Product Use	Personality clash	-	• Personality clash: Family conflict between Chairman and vice-chairman. The majority of HH in this FUG are in different political party from chairman. • Product use conflict between users and committee; as FUGC closed forest ignoring needs of poorer users without alternative sources. • These factors have contributed to a general lack of consensus and FUGC has lacking in confidence in implementing operational plan.

14	**Helebung**		Boundary	-	-	Boundary	• The CF / private land boundary is not defined, and private landowners contest, but both FUG and private landowners willing to abide by surveyors judgement, when it comes. The problem is waiting for surveyor / outside support, meanwhile progress on other FUG business is held up – e.g. cash-crop planting in forest • Boundary with adjacent FUG not defined: FUG is trying to solve themselves.

Table A2.9; Process of Linkage and Network Development *(Assessment of FUG post formation support based on perception of FUG members)*

FUG		Post-Formation Support Received from RP / DFO					Linkage with other Organisations		
No	Name	*Assessment*	Summary	Site visits	Other support	Training	Relationship with other groups?	Outside groups active in village	Comment
1	**Bhaludhunga**	*poor*	• Virtually no support	-	-	-	Poor	• Milk producer group.	-
2	**Jalkini Katlar**	*poor*	• No practical on-site support	• Forest guard attended assembly, but not participated	• Financial support for nursery and plantation (IGA)	• Off-site trainings for FUGC	Good	-	• VDC initiating FUG networking with neighbouring FUGs to stop illicit felling
3	**Patle Sanne**	*poor*	• No arbitration in major land dispute	• No meetings attendance • help blocking forest and drafting OP&C	• Help in amending C&OP after long wait	• Help to facilitate FUG training	Good	-	• Networking – good informal networks with local FUGs and FECOFUN. • Animator working with tole groups
5	**Ramche Sunkhani**	*poor*	• Interference in policy decisions & not clarifying roles & responsibilities	• Occasional visit to FUGC	• Advice to chairman	• FUGC member training at range post	Good	• RRN supporting Women's groups with loans • animator promoting tole interaction	• FUG member of Range-Post level FUG network. • Informal links with NGOs • Chairman is secretary of district FECOFUN • Animator working in FUG with tole groups
6	**Dharma Devi**	*poor*	• Amended C&OP not returned. • No support dealing with thieves	-	• Previously nursery support • Help to form FUG in distant forest	• Off-site trainings to FUGC member	Poor	• BNMT • WDO	• Other groups working in village (e.g. WDO)– using similar approach but FUG not sharing experiences or co-ordinating.
7	**Sibhuwa Salghari**	*poor*	• Virtually no support	-	-	-	Good	• LGP programme with tole-groups.	• Linkage with high-school and with LGP group
9	**Ahale**	*good*	• Very high level of support	• Regular visits	• Financial support • Technical advice • meeting facilitation	• On & off site training,	Good	• Community March • Tamang Ghedung Sangha, Monastery • SSSP DISCO, WDO, DEO	• VDC level Network– from highly motivated leader – impact to resolve conflicts
10	**Paluwa Pikhuwa**	*poor*	• Don't respond to FUG requests	• Initial site visits	• initial financial support for plantation	• Off-site training to FUGC member	Poor	• WDO formed tole groups.	• Local tole development groups and Women's Development Office groups not linked or interacting with FUG
11	**Nakla Daskhate**	*moderate*	• Forest Guard dominating proceedings; not facilitating	• Initial field support • Local Forest guard on FUGC	• Initial financial support for nursery	• Off-site trainings to FUGC member:	Poor	-	-
13	**Bokre Danda**	*moderate*	• After 3 years no further support: FUG dependent on support	• Initial regular visits very helpful.	• Support for IGA	• Off-site training to FUGC member	Good	• LGP have promoted and now all toles have groups	• LGP Groups working with FUG
14	**Helebung**	*poor*	-	• One visit	-	• On / off site trainings but little impact.	Poor	-	- No networking with school /other groups in village

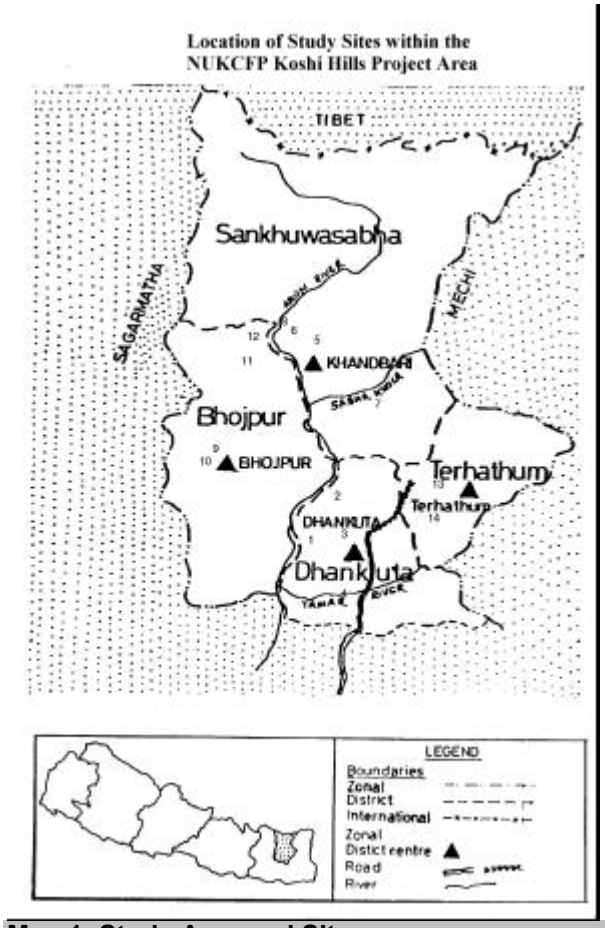
Household Livelihoods in the Mid-Hills of Nepal: The Impacts of Community Forestry

Oliver Springate-Baginski, Om Prakash Dev, Nagendra Yadav, John Soussan

Acronyms

BJP	Bhojpur District
NUKCFP	Nepal UK Community Forestry Project
CF	Community Forestry
DFO	District Forest Office
DHK	Dhankuta District
DOF	Department of Forests (His Majesty's Government of Nepal)
FECOFUN	Federation of Community Forestry Users of Nepal
FUG	Forest User Group
FUGC	Forest User Group Committee
HMGN	His Majesty's Government of Nepal
IGA	Income Generation Activities
PMUML	Communist Party, United Marxist Leninist
RP	Range Post (local Department of Forest office)
SSB	Sankhuwasabha District
TTM	Terhathum District
VDC	Village Development Committee

About the Project:
'Community Forestry in Nepal: Sustainability and Impacts on Common and Private Property Resource Management' **University of Leeds / NUKCFP Collaborative Research Programme**
This paper presents findings from a 3 year research project, funded by DFID through its Natural Resources Systems Programme, and was undertaken by University of Leeds Environment Centre in Collaboration with Nepal UK Community Forestry Project, and NRI.
It investigated the fundamental processes involved in Community Forestry: FUG institutional development at the local level, their impacts on the forest resource, and on farming systems and livelihoods.
The research project ran over 3 years between 1997-2000. The project used a Participatory Action Research methodology, across 11 Forest User Groups (or FUGs), and 3 non FUGs, in 4 hill districts of the Koshi Hills Zone in Eastern Nepal. This involved group level discussions, participatory resource assessments, household interviews, and discussions with a variety of stakeholders at different levels.



Map 1: Study Area and Sites

The study sites were chosen to reflect the great diversity of physical and social and institutional conditions. Throughout this paper case study reference is made to these 11 FUGs, which are as follows:

14 sites were selected for study, involving 11 FUGs and 3 non-FUG sites for comparability, to reflect a variety of different characteristics: district, accessibility, forest area and type, forest condition, number of users, and age. These are shown in the following chart:

Table 1: Characteristics of Study Sites.

Site No.	Site Name	Dist-rict	Accessibility	Forest Area (Ha)	Forest Type				Forest Condition	Number of House-holds	Forest area / Household (Ha)	Year of FUG formation
					Pine	Katus-Chilaune	Sal	Other				
1	**Bhaludhunga**	DHK	Accessible	23.0	-	K-C	-	-	Fair	105	0.22	'96
2	**Jalkini Katlar**	DHK	Medium	213.5	pine		Sal	-	Poor	119	1.79	'93
3	**Patle Sanne**	DHK	Accessible	147.1	pine	K-C	-	Utis	Good	287	0.51	'94
4	**Chimsuwa (non FUG)**	DHK	Medium	-		-	Sal	Hade, Dangero	Poor	*64	-	'98-'99
5	**Ramche Sunkhani**	SSB	Accessible	129.1	-	-	Sal	-	Good	132	0.98	'92
6	**Dharma Devi**	SSB	Medium	10.0	-	K-C	-	-	Fair	53	0.19	'91
7	**Sibhuwa Salghari**	SSB	Remote	107.6	-	K-C	Sal	Utis	Good	117	0.92	'93
8	**Heluwa Besi (non FUG)**	SSB	Remote	-	-	K-C	Sal	-	Poor	*65	-	'98-'99
9	**Ahale**	BJP	Accessible	24.0	-	K-C	-	Utis	Good	69	0.35	'90
10	**Paluwa Pikhuwa**	BJP	Medium	104.9	pine	-	Sal		Good	121	0.87	'93
11	**Nakla Daskhate**	BJP	Remote	34.5	-	K-C	-		Poor	140	0.25	'95
12	**Nepale Danda (non FUG)**	BJP	Remote	-	-	-	Sal	-	Poor	*125	-	'98-'99
13	**Bokre Danda**	TTM	Accessible	31.0	-	K-C	-	Alnus	Good	188	0.16	'89
14	**Helebung**	TTM	Remote	31.5	-	K-C	-	Alnus	Fair	151	0.21	'93
	Mean:			77.9						135	0.58	

**Note: Estimated number of households for non-FUGs*

Accessibility was classed according to whether FUGs were less than 1 hour from District HQs (accessible), between 1-2 hours (medium), or more than 2 hours (remote) – a conventional approach in the Mid-hills.

Forest condition assessment was reached by both research team and forest users, according to density of stands, forest product availability and level of regeneration.

The method used was a 3 yr – action research approach incorporating biometric and participatory resource assessment

Summary

Community Forestry policies were introduced in Nepal by a Forest Department focussed on improving the forest resource. It has been a popular and eagerly adopted policy because of the supposed benefits to forest user households' livelihoods

This paper discusses the complex livelihood impacts of Community Forestry in Nepal, on the basis of extensive field research in the Koshi Hill area conducted by Leeds University and Nepal UK Community Forestry Project in 1997-1999.

The extent to which households' livelihoods are affected by Community Forestry depends primarily upon how the forest and thus forest product availability has improved, and how access to these benefit flows has changed. It also depends on the extent to which the households rely on benefit flows from the forest.

The change in benefits must then be contrasted with the alternative situation if the Forest User Group had not been initiated.

There is an inevitable transition period when the forest is regenerating under restricted access, and this typically leads to a shortfall for poor the most forest-dependent households.

The findings for the study area are again highly diverse, by location, forest type and condition, livelihood strategy of household, age of FUG and so on. In most cases however forest users feel relieved that the degradation of the forest has reversed to a great extent, and that benefit flows are now on a more-or less sustainable basis. In some cases there has been an overall increase in benefit flows. In some FUGs benefit flows have reduced. There have been management challenges for FUGs with some poorer household members dependent on fuelwood selling, or on charcoal production for blacksmithing livelihoods. In some cases this has led to some social stigma and conflict. However it would be mistaken to exaggerate the difficulties, as most FUGs have sought to accommodate and support the particular livelihood needs of poorer households.

Secondary (though not necessarily less significant) effects on livelihoods have accrued from other opportunities arising from the FUGs activities; for instance employment opportunities, the provision of credit facilities, the improvement of infrastructure like locally available drinking-water supply, and so on.

This paper first briefly introduces Livelihood Systems analysis, and goes on to look at outcomes of the Community Forestry policy on the forest resource and the local capacity to manage it. It also looks at the livelihood background of forest users in the Mid-hills of Nepal. The impact of Community Forestry on forest users is then discussed in detail, according the livelihood systems model. In conclusion some policy implications are discussed.

1 Overview

1.1 Evolution of Community Forestry Policy

Historically forest management in Nepal has been based on collective, private or feudal arrangements. The forests in rural areas were primarily used for local subsistence needs, and managed on this basis.

The Nationalisation of forests in 1957 brought in 'second generation forestry' under which the government took control of forests and sought to manage them through the Department of Forests. Whilst politically expedient, this separated the subsistence users of forests from a

role in their management. This, along with a number of other factors, led to a institutional vacuum at the local level, and a *de facto* open access situation regarding forest use.

Community Forestry policy in Nepal emerged in the late 1970s as a response to the decline in the forest resource. The policy has sought to reverse this by introducing a local institutional basis for the local regulation of forest use – Forest User Groups. The reintroduction of local people into a management role through community forestry, spelt the 'third generation forestry' in Nepal. It has been eagerly received in rural areas as it has provided the legal institutional basis for forest users to collectively regulate forest use.

Community Forestry prioritised forest resource protection and improvement, and envisaged the motivation for local people's involvement to be their basic needs provision. There have indeed been many livelihood benefits to the local forest users; at the most basic level forest product supply for most users has become more reliable, often availability has increased, and sustainability is more assured. Furthermore FUGs have often addressed other community development priorities along side forests.

1.2 Distinguishing Outputs, Outcomes and Impacts of Community Forestry

Assessing the livelihood impact of Community Forestry on households across an FUG is complex for outsiders to understand, as it is differentiated according to many factors. Households are highly diverse in terms of ethnic and caste groupings, wealth and income levels, and education level. For individual households with composite livelihood activities, the impact may not be so complex for them but may nevertheless be challenging; for instance a reduction or increase in laboriousness of day-to-day tasks when forest areas are closed, or are regenerated.

An analysis of the livelihood *impact* of Community forestry policies demands that we trance the *outputs* from policy implementation (in terms of the formation of FUGs and support to hem) and the *outcomes* (in terms of adoption of outputs by forest users and their application over time). Policy *outputs*, *outcomes*, and *impacts* may be distinguished as follows, according to the model provided by Oakley *et al.* (1998):

Table 1: Outputs, Outcomes and Impacts

	What is measured	Indicators	Indicators for Community Forestry
Output	Effort	Implementation of policy	o Formation of Forest User Groups o Increased Forest Department field support capacity
Outcome	Effective-ness	Use of outputs and sustained production of benefits	o Collective decision-making o Effective local forest management o Improvement in forest condition
Impact	Change	Difference from original problem situation	o Access to improved forest resource: Improved and sustainable flows of forest products o Other livelihood benefits

After Oakley et al (1998) p. 33

From a livelihoods point of view we may say that for the Department of Forest the objective and focus of activity has been forest resource protection and improvement: *outcomes* of CF policy, whereas the direct interest of local people has been the *impact* of this resource improvement on their livelihoods.

1.3 Why is Livelihood Development an Urgent Priority: Poverty and Forests

Poverty is extreme in rural Nepal, and all available resources can be carefully mobilised to eradicate it. Livelihoods in the Mid-hills of Nepal, even amongst the middle farmers, are amongst the poorest in the world. But for the poor, with few resources of their own life is particularly difficult. Forests represent the primary common property resource which the poor

can use for subsistence economic activities, whether it is collecting NTFPs and fuelwood, charcoal production or fodder for livestock.

1.4 Findings of Previous Studies

To date there has not been a direct and comprehensive study of livelihood impacts of community forestry across a number of sites, although a number of studies addressing the issue of the livelihood impact of community forestry in a small number of sites, and in a modest way have been conducted in recent years.

Perhaps the most significant quantitative study was performed by Maharjan (1998), who in a previous RDFN paper assessed the distribution of costs and benefits in a single FUG in Dhankuta district. His study highlighted the frequent equity problems of new forest management regimes, which can reduce the access of poorer households to product flows such as fuelwood which they may depend on. Maharjan also highlighted the importance of more effective participation of poor groups and women, in order that FUG management plans reflect their interests. He also highlighted the opportunities for commercialisation of forest product collection and processing where appropriate.

2 Conceptual Framework for Analysis of the Livelihood Impacts of Community Forestry

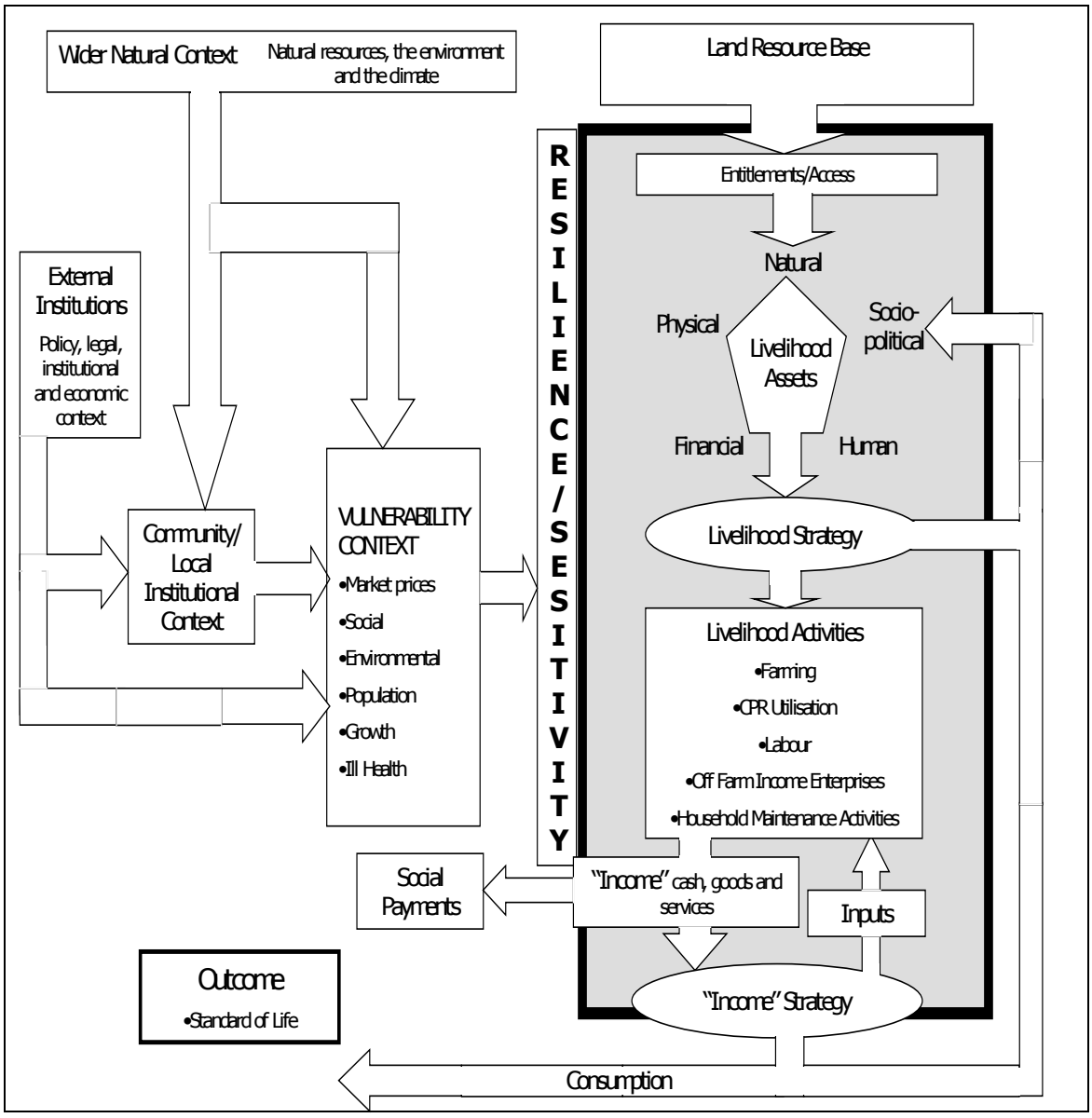
2.1 Modelling Livelihood Systems

In order to assess the impact of Community Forestry of forest users livelihoods, the research used a livelihood systems model. Carney (1998) presents a definition of livelihoods based on the work of Robert Chambers and Gordon Conway (1992):

> *"A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base"* (Carney 1998, p. 4).

There are a number of livelihood systems models which attempt to present the processes through which households livelihoods function. The following (Soussan *et al* 2001) will be used in this paper as a point of departure.

Diagram 1: Livelihood Systems Model (from Soussan et al 2001)



This livelihood systems approach comprises a number of basis aspects. Households build their livelihoods on the basis of their livelihood assets and available opportunities. They draw not only on household **livelihood assets**, but also augment these through **entitlements** to locally available capitals, such as tree and forest resources. Different households within the same locale have diverse levels of household capital assets. The poorest may have to rely on only have their own human capital and entitlement to common property.

Households arrive at a **livelihood strategy** on the basis of assets available, in view of opportunities arising, access qualification, risk aversion and perceived benefits. On this basis they then engage in **livelihood activities**.

For most households in the mid-hills of Nepal the main livelihood activity is agriculture, usually augmented by other cash-earning activities such as a member of the household going to the plains in search of work. Artisanal production also occurs, with skills and tools passed inter-generationally within households. For households with little or no agricultural land, low educational levels and without specialised skills, the main alternative opportunities open are local manual labour: agricultural labour or portering. Collecting forest products can be an important adjunct to these sorts of livelihoods, which are particularly vulnerable to seasonal fluctuations in demand.

Changes in the entitlements / access conditions can vitally affect households livelihoods, as can changes in the condition of resources.

This model gives an understanding of both households' livelihood processes, and allow one to 'map' the consequences of specific changes, including changes brought about through external interventions intended to improve people's lives.

The Community Forestry approach in Nepal made little progress in the initial period, and it was only after a protracted period of intensive efforts and several iterations of policy that the policy began to bear fruit. That this is the case reflects a range of factors that can be related to the different components of the livelihoods model presented above:

A re-definition of the **external policy and legal context**, through new laws (particularly the 1993 Forest Act and associated 1995 Byelaws changed the tenure and access rights and new mandates for government forestry departments. It can include provisions for changed access to markets for forest products. Effective channels were also open to learn from the field implementation of existing regimes. There have also been substantial efforts made to re-orientate the Forest Department, with eventual, far from complete but nonetheless praiseworthy success.

The **wider social and political environment** has also been of tremendous importance, with early efforts frustrated by the forms of social control that the semi-feudal *panchayat* system imposed and, in contrast, a rapid growth of community forestry following the 1990 revolution that swept away the *panchayat* system and opened up the possibility of local institutions that were representative and regarded as legitimate by the majority of the population. These political changes also led to a new 'culture' in many government departments, who now saw their role as serving, rather than controlling, the people.

The CF approach changed the **local social and institutional context**, by creating, as an *output* of policy, both new local institutions (Forest User Groups) and raising awareness and understanding. The FUG have become pivotal in the empowerment of local communities to manage forests in ways that are seen to be representative of all (in what are often extremely complex local social situations) and provide an effective interface with the external institutions of the Forest Department. This change to local institutions, the formation of Forest User Groups, is one of the specific targets of the policy, the effectiveness of which can be (and has been) assessed in terms of both quantity (numbers formed, membership, geographical coverage, effectiveness of operations, etc) and, more challengingly, quality (participation in, and representativeness of, the committees, gender relations, empowerment in relation to accessing government institutions, etc). The implications of the groups can go further than forestry management, as many of the more effective and established ones start to become involved in other activities such as farming, schools, water supply and path maintenance. As such, the development implications of community forestry in terms of creating new forms of social capital can go far beyond forests.

Through the FUG, an *outcome* of community forestry policy is changed **entitlements and access** of individual households to the forest. The effects on this will vary from household to household, depending on existing dependence on the forest, but what the policy does is legitimise existing or create new entitlements to the forest. This is the second specific objective of the policy and again can be directly related to the livelihoods model in terms of assessing the implications for access to natural capital (forest products and services) of the policy. This can then in turn be worked through to assess the implications of this changed access to natural capital for different stakeholder groups (below).

A further *outcome*, through better-regulated access to the resource base by the new FUG institution, can be an **improved forest resource base**. Improvements to the forest condition are widely observable where community forestry has successfully developed.

The outcomes of Community Forestry policy: improved regulation of access to forest resources, and improvement to forest condition, can in consequence lead to *livelihood impacts*: improved flows of forest products available on a sustainable basis.

These are more likely to occur if the forest user group is both egalitarian and effective. However, it is possible that poorer households, who have traditionally relied more heavily on common property resources, will suffer disproportionately in the shorter term where, as is often the case, the FUG imposes heavy restrictions on forest use to allow for the recovery of degraded forest areas.

This in turn means that **livelihood activities** such as fuelwood gathering or livestock grazing can be more productive and/or sustainable (and perhaps may take less time, with beneficial effects for labour availability for other livelihood activities). There will however be trade-offs between the costs of foregoing short-term forest and pasture exploitation for longer-term gains in sustainable forest production.

There are examples, such as the cultivation of cardamom or the tapping of resin in the forest, where community forestry can open up new livelihood opportunities for the members of the FUGs. In such cases, a critical issue is the distribution of these benefits amongst different groups in the FUG.

The sustainable level of **income** can consequently be improved, with fewer concerns about gathered forest products and, for some, more secure livestock production. In some cases, there is a potential for increased cash income through the sale of forest products. However, the precise modalities of sale and distribution of proceeds will determine the distribution of any improved income streams. These may accrue as income to individual households or to the community as a whole, allowing them to invest in local public facilities such as water schemes, nurseries or schools.

All of these factors together may reduce the household's **vulnerability** to declining forest availability, shortages of fuel and fodder and dangers of land degradation from watershed destruction in the longer term. The creation of new local institutions, access to new resources and new patterns of social relations all also have implications for the resilience of different households to cope with vulnerabilities (and not just those related to forests).

In the short term, impacts upon resource poor households in resource poor villages may *increase* vulnerability (cf. a recent headline in *The Rising Nepal* 'Community Forestry causes Famine' with a case study in some Districts in the Western Region). The extent of this is a critical issue in the assessment of the impact of community forestry, but whether positive or negative, there is little doubt that the development of successful community forestry is important in altering both the vulnerability context and the resilience of different households in terms of their ability to cope with vulnerabilities.

3 *Outcomes* of Community Forestry: FUG Institutional Development and Forest Resource Development

The *impacts* of the implementation if Community Forestry policy can be traced through the above model. However we must be cautious to distinguish and differentiate the effects on specific households (and groups of households) within the notional community. The outcomes and hence impacts of Community Forestry are strongly mediated by the great degree of variation in specific local circumstances of each Forest User Group. Circumstances may be separated into three main aspects: institutional, physical and social / household. This section considers these variations, and looks at the outcomes of Community Forestry at the Institutional and Forest level.

3.1 Institutional Outcomes of Community Forestry: Capacity to Manage Forest and Regulate Product Extraction

The FUGs formed through Community Forestry policy have sought to manage local forests primarily in order to improve their condition, in order to secure sustainable and improved levels of product flows for member forest users. From the Leeds /NUKCFP research programme FUG institutional processes were identified, and institutional capacity was assessed. Here a brief summary is provided– not washing to repeat reader is referred to paper 2.

The policy objective of Community Forestry is to initiate local forest management institution, but these do not just start running perfectly from formation. They take time to develop effective functioning and social recognition, legitimacy and cohesion. From the Leeds / NUKCFP study it was found that of 11 FUGs in the sample, 2 were not properly institutionalised, due to poor formation processes. In 8 of 11 FUGs social cohesion was a problem – often due to the size of the FUG and the fact that it is a 'created community' of diverse *toles* (hamlets) which have had little prior interaction.

'*Man milne'* (translation: heart-felt conviviality and understanding) was regularly cited in tole meetings as an indicator of good function of an FUG. The FUG is a 'constructed community' made from toles (hamlets) which can be distributed across wide areas around the forest. Unity and conviviality is very evident in tole-level interaction in all areas, as is informal collective action, such as tole development groups. However unity is much less evident at FUG level, where, across toles there is less community feeling. However in smaller FUGs, or in FUGs with low caste/ethnic diversity there tends to be more unity amongst users.

FUGs can often find it problematic to identify a common purpose, as different toles, with different wealth-rank and location characteristics are likely to have differing needs from the forest. For example in many FUGs some poorer households may depend on fuelwood selling, which can clash with other FUG members desire to encourage regeneration through restricting product extraction. Reaching agreement on issues such as this can be a major test for FUGs unity.

In only 3 FUGs could the users really said to be united at the FUG level. In Ahale FUG the users are mainly from Tamang ethnic group and share a collective feeling on this basis. They regenerated the forest from scrub-land to have a strong sense of collective achievement. In Dharma Devi FUG the users are highly dependent on the small forest for fuelwood as the crop-land is mainly Khet, so they keep very few on-farm trees. In both Ahale FUG and Dharma Devi FUG the number of users is relatively low, and they depend strongly on the forest for regular product flows. In Patle Sanne FUG there is a strong sense of unity thanks to large revenue flows from resin-tapping, which have paid for community development activities. There has also been very dynamic and reliable leadership.

In the remaining 8 FUGs there is varying degrees of lack of unity amongst users. In Bhaludhunga this is due to lack of awareness of many users regarding the formation of the FUG. In most FUGs however the lack of unity is due to social friction between groups, often due to the dominance of elites or of particular toles, or of biased leadership. Languishing

conflicts over forest encroachment or illicit product collection can also lead to friction across different social groups within the FUG.

Although there is frequently a lack of real 'cohesion' across forest users, there is nevertheless a sense of ownership of the forest, in all but two of the FUGs studied (where the FUG had not been properly institutionalised.

Legitimacy depends on decision-making processes, and whether the FUG is functioning in an effective and inclusive manner. If FUG decisions reflect the interests of the local elite decisions may not be observed. In 8 of the FUGs studied decision-making processes were judged as moderate or good in terms of transparency and inclusiveness. However, only 3 (under 1/3rd) may be classed as genuinely 'community forestry' the remaining 7 being shades of 'committee forestry, mainly due to the most competent community members taking the lead under difficulties, but also unfortunately also due to opportunism of some elites.

For the forests to regenerate, forest product extraction usually needs to be restricted. All of the 11 FUGs studied have been able to introduce at least 'moderate' (3 cases) if not 'good' (8 cases) forest protection, including those 'poorly institutionalised'.

Most FUGs start out with a passive and conservation-oriented forest management plan. This does generally encourage forest regeneration. As the forest regenerates some FUGs with more institutional strength take advantage of the changed conditions to move to a more pro-active dynamic management pattern – generating a variety of benefits for diffent groups of forest users, reflecting their actual needs. It is these FUGs which can have the greatest positive impact on users livelihoods.

3.2 The Physical Conditions: Improvement in Forest Condition through CF

Different FUGs are endowed with different sizes and types of forest, in different conditions, and subject to different patterns of use. In the Leeds / NUKCFP study a diversity of forests were studied, the main types being Pine, Katus-Chilaune and Sal, in a range of conditions, from degraded to very good condition, (in terms of number and mix of age-range of plants).

The location of forests affects their use-patterns. Forests closer to district headquarters and main settlements are more subject to fuelwood collection for sale, and to timber extraction. Pine forests close to roads can be more easily tapped for resin. In agricultural areas where irrigation is available farmers often maximise productivity by avoiding having trees on bunds, and so are more dependent on the forest for fuelwood and fodder.

In most FUGs, prior to the FUGs formation there was concern over forest deterioration through unregulated use. The FUGs have generally been able to regulate use, and so reverse the degradation, but the effect on the forest is usually slow, and it can take a number of years to improve the condition of the forests through regeneration. During this period access to the forest is restricted, which can affect users livelihoods, subject to alternatives available to them.

10 of 11 FUGS studied score good' as an indicator of whether their forest condition is 'good or improving', and one scored 'moderately'. This indicates that even though most FUGs are suffering institutional development challenges, they are still able to achieve their primary objectives.

The forests are certainly improving, however availability of certain products may not be improving as much as others.

3.3 The Livelihood / Social Conditions: Patterns of Household's Livelihoods and Forest Use, and the Livelihood Impacts of CF

In order to understand the livelihood impacts of Community Forestry in any depth one needs to understand the diverse patterns of forest use, livelihood activities and social conditions specific to each area. Key factors affecting the impact of CF on household livelihoods include the location of specific users in relation to the forest, the ethnic caste background of specific users, and the homogeneity or heterogeneity of the user group affects impacts.

This paper attempts the difficult task to assess the livelihood impacts of the FUG. Because of the complex patterns of forest use the question of how particular changes in forest access have affected users is very challenging to answer. Furthermore there will have been many changes in local circumstances over the period since the FUG in question was formed separate to the FUG.

There is a widespread misconception that forest users are members of one user group only, and depend on one forest only. Forest users in fact have complex patterns of forest use – often depending on diffent forests (at different altitudes) for different products and services at different times of the year, often complemented by on-farm tree products. This may be most evident in the case of livestock grazing – where settlements at different altitudes can have seasonally reciprocal grazing arrangements. Farmers may need fodder, wood for ploughshares, fuelwood, and poles and construction timber, each of which may come form different forest areas. Blacksmiths tend to need particular types of wood for tool handles, and also wood for charcoal.

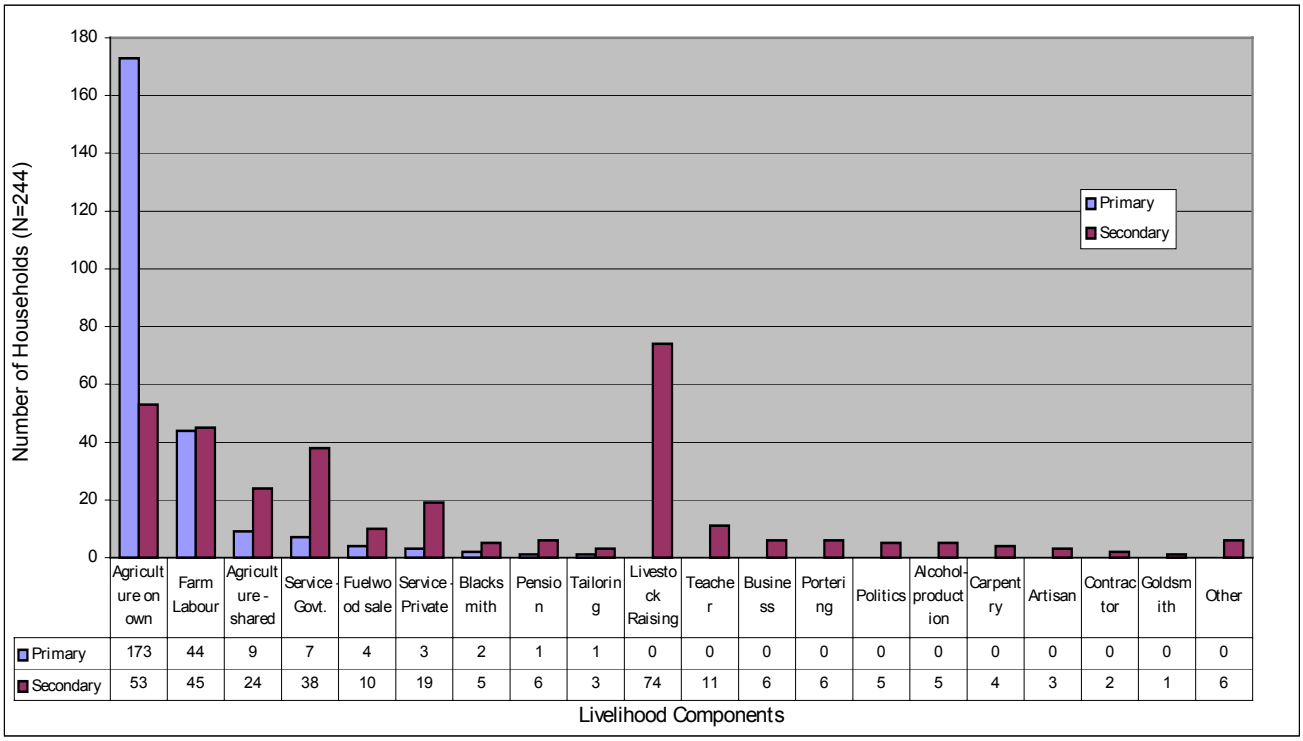
Using the livelihood analysis approach discussed above we may now consider the livelihoods of different households in the mid-hills, and how Community Forestry has impacted them.

The livelihood benefits from improved forest resource management vary by each household. In order to understand how different group's positions have been affected it is important to disaggregate users by wealth rank, and also by dependence on the resource.

The following chart shows that the main primary household livelihood in the area studied is agriculture on own land (73% of households interviewed). The next most common primary livelihood was cited as labouring – by only 18% of respondents.

Chart 4.3A: Primary and Secondary Livelihoods of Respondent Households

Notes: 'Artisan' means skilled worker; for instance housebuilder, carpenter etc.



	Agriculture on own	Farm Labour	Agriculture - shared	Service - Govt.	Fuelwood sale	Service - Private	Blacksmith	Pension	Tailoring	Livestock Raising	Teacher	Business	Portering	Politics	Alcohol-production	Carpentry	Artisan	Contractor	Goldsmith	Other
Primary	173	44	9	7	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0
Secondary	53	45	24	38	10	19	5	6	3	74	11	6	6	5	5	4	3	2	1	6

'Others' include Cottage industry (e.g. carpet-making, goldsmith, moneylender, resin-taper, nursery-foreman, priest,

Although agriculture on own land is the predominant primary livelihood, there is a greater variety in secondary livelihoods, indicating the diversity of livelihood strategies adopted by

mid-hills households to spread risk. The most frequent secondary livelihood activity was livestock raising, (cited by 30% of households). Other important secondary livelihood activities are agriculture on own or shared land, farm labouring and service, both government and private. The chart shows that a diversity of local income-generating activities, (mainly petty business activities) are also engaged in as secondary livelihoods.

Although discussing households 'main' and secondary livelihoods gives an initial understanding of the sorts of activities present, there is a great heterogeneity in households' livelihoods. One method used in the research study was a wealth ranking exercise. In group discussions a number of ranks in the village were identified by the local people. Usually 4 (Rich, Medium, Poor, Very Poor), with sometimes 5 ranks identified where subdivisions of poor were made. The criteria for each of these ranks was then identified: land-holding, self-sufficiency in food, livestock holding, employment of household member in government post, labouring etc., and so on. In each village slightly different criteria were identified, and when these were compared general common criteria could be identified.

To understand wealth patterns within villages, a wealth ranking exercise was performed in each FUG. Through group meetings in each FUG users are asked to give categories of wealth within the village that are commonly used. Although the criteria for wealth-ranks were subjectively reached in each FUG, surprisingly there were strong commonalties across the FUGs, which are summarised below. In all villages local people cited either 'Rich, Medium, Poor and Landless' or 'Rich, Medium, Poor, Very Poor and Landless'. This has allowed comparisons to be made by wealth-ranks across all the FUGs studied. Common indicators of household wealth and livelihood across all the villages studied were identified and are shown in Table 2.2.1 below.

Table 4.3: Indicators of Wealth Rank 1-4 Common across Study Sites:

Wealth Rank:	Rich	Medium	Poor (Including Very Poor where cited)	Landless
Food Production	• Sufficient food production for 12 months and surplus for sale.	• Just or almost sufficient food production for 12 months.	• 3-6 months food production.	• Little or no food from own production
Land	• Large *Khet* and *Bari* land and perhaps land in Terai / plot in town.	• Sufficient land to feed family	• Little land, mainly *Bari*	• Landless (only *Ghaderi* and perhaps a tiny plot of Bari land)
Livestock	• Livestock (Cattle: Cow / oxen / buffalo)	• Livestock (Cattle: oxen, few cow, sometime buffalo)	• Little or no cattle • Some small livestock.	• No cattle, • Perhaps small livestock: a few pigs / goat / chickens.
Service / Labouring	• Service (e.g. school teacher, private job, administrative job in govt. office/VDC, army etc	• Minor service /job. (peon, clerk, primary school teacher, seasonal work outside village or in India etc)	• Seasonally dependent on labour (agricultural / portering) or skill-based job (e.g. carpentry).	• Dependent on agricultural labouring, blacksmith, portering, etc.

The overall distribution of user household by wealth-rank is as follows:

Chart 4.3B: Wealth Rank of FUG Member Households (from 11 FUGs studied)

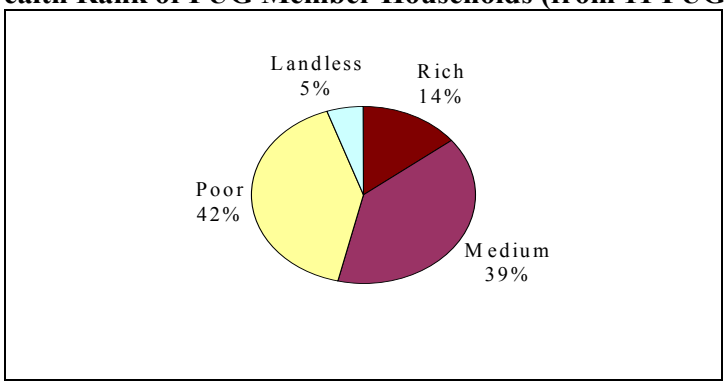


Chart 2.2.1C below shows the distribution of wealth across the different FUGs studied:

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Comparing between FUGs, Sankhuwasabha is a relatively richer area with over 75% of households falling into medium or rich wealth ranks. Sankhuwasabha shows higher medium / rich proportion (in each FUG >3/4 of households) – mainly due to more Khet land in this district. There are also more market and service opportunities: two main towns: Chainpur (the old district HQ) and Khandbari (the current district HQ).

Bhojpur is shown as a poorer region, with over half of respondent households falling into poor and landless categories. Dhankuta and Terhathum are somewhere between these two.

Note that at Jalkini there are virtually no landless users. This is explained by the exclusion of blacksmiths from membership of the FUG, as mentioned above.
Different wealth-ranks show different dependence on the forests. Medium, Poor and Landless groups are most dependent on forest. Rich farmers usually have on-farm tree resources, to supply their needs. Medium and poor groups have cattle and so need fodder supplies, and also on leaf-litter where appropriate. Medium, poor and landless depend on firewood supplies from forest for cooking, and poor and landless groups are often involved in selling firewood in the local markets.

Rich wealth rank households have diversified sources of income including secure and well-paid jobs, surplus grain from their own agricultural land, and often are able to rent out land. They commonly have private resources for supplying tree products. Hence they are much less dependent on forests for product flows, and were mainly interested in forests for construction timber, and also ploughshares.

Medium class – are the main subsistence farmers, who work hard on their own farmland to produce sufficient food for family. If the family is large they may also rent or share in land of rich groups, as they usually have livestock to plough and fertilise, and labour-force. Across all FUGs studied 39% of households are medium class.

Medium wealth-rank households have farmland and much livestock and tend to depend on forests for fodder as well as fuelwood and timber, but have some private tree resources to fall back on.

Poor households mostly depend on seasonal agricultural labouring, portering and other skill to supplement their food production from their own land. As the education-level in this wealth-rank is low all family members depend on agricultural based activities, portering, or skill-based activities in the local area.
Some FUGs categorised households into 5 categories – 2 levels of poor between landless and medium: poor and very poor: the distinction is made on landholding, and food production, very poor having only around 3 months food production, and poor closer to 6 months.

Poor households may have some livestock and farmland, but have little private access to tree products are so can be particularly dependent for the forest for animal fodder and leaf-litter for composting.

Landless – in hills means having no agricultural land for food production, although they will have in most cases plot for house and small courtyard. They are in extreme poverty, depending on local agricultural labour, portering, and working in others household to get just food.

Poor and Landless households often depend on forests for inputs to support market-oriented activities such as fuel-wood selling, alcohol-distilling, charcoal for blacksmithing, etc. Their livelihoods are extremely fragile and marginal.

Both poor and landless groups are exposed to low levels of nutrition, poor education, and poor communications within village and with external agents. They tend to be less involved in meetings, and suffer social exclusion.

All wealth-ranks use the forest for fuelwood supply, although rich and some medium wealth-ranks are less dependent as they have access to private resources.

Use of Forest:
Forests are used for a number of inputs to rural households livelihoods. In farming systems, leaf fodder is lopped from trees, and leaf-litter collected from the forest floor for animal bedding. The manured bedding is collected, in order to be composted and spread on fields for fertiliser.

Forest land can also provide a source of grazing for livestock, either through rotational grazing on site, or by cut-and-carry stall-fed practises. There is a policy gap in CF with regard to grazing potentials as at present few FUGs manage grazing practices CF could be focused on improving fodder supply. Currently collective management of planting of improved grassed occurs successfully in a few FUGs.

Educational Level of Households:

The following chart shows the far lower educational level of poor wealth rank households, and also of women.

Chart 2.2.3: Highest Education Level in Household by Wealth Rank and Gender

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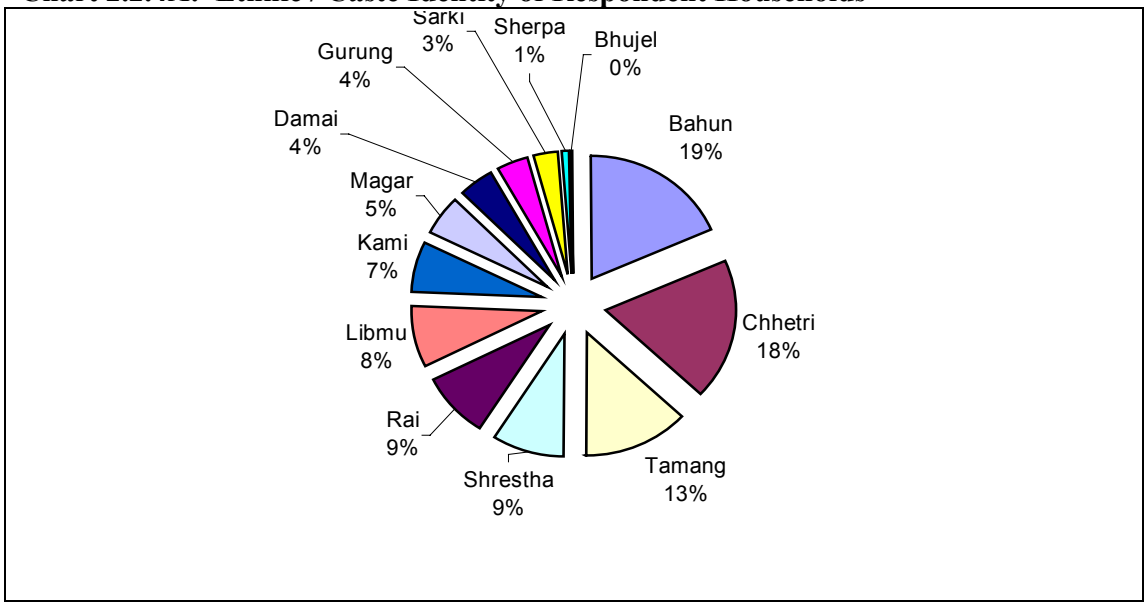
Illiteracy is higher for women compared to men in all wealth ranks, both rich and poor.
More educated youths tend to move away from remote areas in search of jobs. As there is much illiteracy people don't have access to information, which makes them passive to opportunities which they are unaware of. Less educated people are often assertive in pursuit of their needs, but lack access to information. There are widespread calls in tole meetings for non-formal literacy education, especially from women.

Ethnicity and Wealth Rank

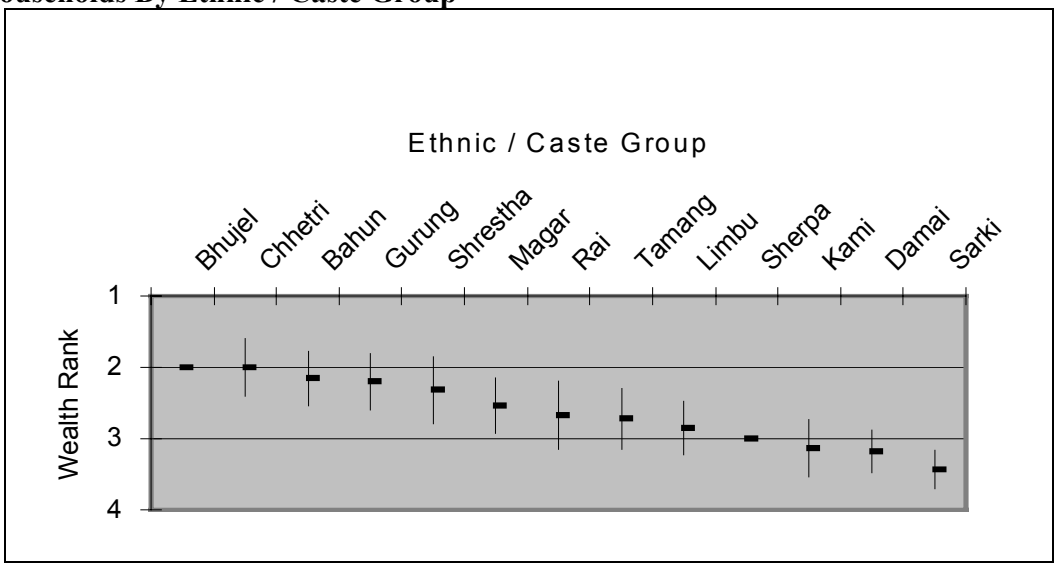
The Koshi hills are predominantly Rai and Limbu area, with Limbus most predominant in Terhathum, and Rais most predominant in the remaining 3 districts of Bhojpur, Sankhuwasabha and Dhankuta. Bahuns and Chhetris are also widely distributed. However in this survey we found a wide spread of different ethnic groups amongst respondents with Bahun, Chettri and Tamang respectively the most common ethnic groups. The following chart indicates the ethnic / caste identity of households surveyed:

Chart 2.2.4A: Ethnic / Caste Identity of Respondent Households



It is sometimes said that caste/ ethnic group is not a guide to wealth, and that there is variation from place to place. The results of our study show that so-called 'lower' ethnic groups such as Kami, Damai and Sarki do have a correspondingly lower wealth-rank. Bahun and Chhetri have access to private resources and networks, and have a better wealth situation in general.

Chart 2.2.4B: Mean Wealth Rank and One Standard Deviation of Respondent Households By Ethnic / Caste Group



4 Livelihood Impacts of Community Forestry

This section discusses the impact of CF on livelihoods of local people. In order to understand the impact of CF on household livelihoods, a Livelihood Systems approach has been adopted. The livelihood systems model, as described above, provides a conceptual basis for assessing how, on the basis of improving the different household assets and entitlements, and improved opportunities, livelihoods may improve.

The impact may be distinguished into four aspects:

- Improved and more sustainable flows of forest products

- Support for community infrastructure and development activities
- Household livelihood / income generation opportunities (including credit facilities)
- Improved 'social capital' for collective planning and action

Beyond the direct benefits to households from improved forest product flows the users have conceptualised FUG support as support for household income generating activities and for community development activities (i.e. village infrastructure development).

Discussion of impacts s here organised according to the logic of the livelihood model. The main impact on households is certainly the changed quantity and sustainability of forest product flows, through improvement to the forest resource. Other indicators used are the opportunities opening to households through FUG activity, improvements in other household and local assets.

The range of indicators discussed below reveals changes in the behaviour of individuals and households, which are usually multiplicative and reinforcing, rather than additive. Many of them reveal complex processes which may alter people's capabilities through time, often in subjective and diffuse ways, many evade precise definition and quantitative measurement.

The main areas of impact of community forestry on household's livelihoods may be listed as follows:

4.1 Improved and more sustainable forest product flows (Improved 'Income')

These are due to improved forest resource condition ('Natural Capital'), and changed entitlements to use it.

The legal reform of forest management to allow FUGs to function has improved entitlement to and ability to influence management of forest resource. Legal reform of the tenure conditions regarding forest use is an *output*, and *outcome* and an *impact* of CF policy, having direct and indirect consequences upon livelihoods, in the sense that households are able to co-ordinate forest use and management practices.

The Forest Resource

In all Forest User Groups, as we have seen the forest resource (or '*natural capital*') is improving. This is a major achievement for the FUGs. This has been achieved through diligent protection of forests from forest fire, illegal tree felling and unregulated extraction of forest products. There have also been plantations on barren land to improve forests. Efforts of FUGs to resolve land disputes with individuals and neighbouring FUGs are limiting the extent of forest encroachment.

The Impact of Restrictions on Forest Use

Improving the forest resource has not been without costs. In order that the resource can improve unregulated extraction and grazing has been brought under control. This implies those who were previously using the forest have had to reduce their use. Particularly during the initial period when restrictions are imposed, those forest users most dependent on the forest can feel at odds with the FUG. Fuelwood sellers in particular have complained bitterly of the restrictions on collection of fuelwood, and many have ignored the restrictions. It is apparent that there has been a degree of accommodation to their needs on the part of the FUGs in the sense that transgressions have been tolerated to some extent.

Clearly those households most dependent on the forest are most impacted by the restrictions, and have to suffer during the period of regeneration. On the other hand they are also most likely to benefit from improved forest condition after the transition period. Whether they do depends on the product distribution regime.

The Entitlement Structure: Improved Benefit Flows

The improvement of the forest resource has a number of intangible benefits such as tree cover and improved hydrological regime, which all users generally enjoy.

Tangible forest product flows have increased in 7of the 11 FUGs studied. Perhaps the strongest example is Ahale, where prior to FUG formation the forest had become completely

denuded. Through protection it regenerated to the point that now there is a sufficient fuelwood supply for all the FUG members. In most FUGs the difference is not so radical,
Flows of products suitable for Soil nutrient management (e.g. leaf litter for compost making and fodder) have generally improved, due to the general improvement in the forest condition. However with little deliberate strategy to promote these products the improvements are well below the potentials.

In 4 of the 11 FUGs studied product distribution had not improved so far. In 3 of the remaining 4 FUGs there have so far been problems around managing product distribution. In Nakla and Bokre Danda FUGs there has so far been hesitation to open forest due to lack of FUGC ability to regulate extraction properly. In Bhaludhunga there has been little change in the forest use as the FUG is in early stages of becoming organised. Lastly, in Helebung FUG forest use has been restricted due to current low availability of desired forest products.

In most FUGs entitlement to collect forest products is conditional on the payment of a flat-rate fee. When the fees are nominal they make little difference. Timber fees are however usually sufficiently high that they discriminate against poorer users.

Some FUGs have also tried to introduce higher membership fees, in order to raise funds. And these can discriminate against poorer users, particularly when they are not interested in the uses the fund is put to. In

Sustainability of Benefit Flows
In some FUGs the users are more satisfied with the fact that the forest use is now on a sustainable basis, both for day to day products like fuelwood, and also long-term needs such as construction timber. In some FUGs there is concern regarding over-extraction, and measures are being taken to control this: In Jalkini and Ramche there is concern regarding over-extraction of Sal from timber / plough threatens future security of product flows. In Ramche and Jalkini FUGs, due to proximity of market and high value of Sal timber there is uncertainty of future quality timber availability for construction and agricultural tools.

4.2 Improved 'Social Capital'
Social capital in terms of FUGs implies a new social forum for local level development planning, and improved social support structure and cohesion

The benefits to the creation and draw-down of **social capital** depends upon the participation of households and individuals in local institutions, enhanced knowledge of rights and duties involved in securing a livelihood and in any enhanced benefits from collective action. Also, there may be crucial networks and contacts, necessary to access other capitals.

This impact is very difficult to assess. One approach is to think of the overall framework of social networks and relationships as the generic 'stock' of social capital, with different households able to access different parts of this stock dependent upon their 'social entitlements' (which in turn will reflect things such as social group, kinship, religious affiliations, political links, epistemic groups and any other of the factors that go to make up social networks). This development of an entitlements approach to social capital has not been developed further than an initial idea, but it will be explored in the field as a basis for understanding what is the most elusive of the livelihood capitals.

FUGs represent new social capital. They are new local institutions which provide the basis for community decision-making. Some FUGs are going beyond just forest management are becoming based on *tole*-level development planning, empowering local communities to demand the appropriate services from local government line agencies, and direct VDC and DDC planning according to local priorities.

In Ahale FUG, for instance, where there is strong social cohesion and development orientation, there has been energetic adoption of development planning approaches based on tole interaction, and a variety of consequent livelihood and community development activities. Such as support to other social institutions like youth-clubs,
Here the FUG is becoming the conduit for support from outside agencies to toles.

However in other FUGs the picture is very different. Bhaludhunga FUG for instance is poorly institutionalised, and although the foundation exists, there has been little institutional development or social cohesion.

Cohesion and support mechanisms are evolving at variable level from FUG to FUG. The pattern emerging is that in smaller FUGs cohesion is strong across the whole FUG (e.g. Ahale FUG in Bhojpur Dharma Devi), but in larger FUGs social cohesion mainly develops within toles, and so FUG meetings must be carefully facilitated by tole representatives. Since most FUGs are large (in terms of forest size and number of households), the latter pattern is more common.

The development of social capital on which local tole can come together to plan their own development is one of the strongest opportunities for the CF process in the mid-hills. The micro-action planning process proposed in section 15 is one proven approach to developing the FUGs' social capital further.

It is very difficult to make generalisations over the distribution of benefits from new 'social capital'. In some ways perhaps the pre-existing elites have benefited more than middle or poor households so far. However it is not amenable to direct measurement and so remains a somewhat abstract debate. One thing is certain, that promoting more inclusive decision-making structures will give proportionally greater benefit to poorer households.

*4.3 Improved Community Infrastructure ('***Physical Capital'***)*

This includes educational facilities (developing 'Human capital') through FUGs community development activities. They can have serious impacts upon the livelihoods of poor people living in the area where these investments are made.

Through FUG community development activities improvement to the village level infrastructure, or physical capital have occurred in the majority of FUGs under study. The main examples are as follows:

- Trail making
- Drinking water supply installed
- Schools are being supported in terms of salary of schoolteachers, fund and timber contribution for construction of school building, and financial support.
- Construction of community halls / Agricultural group halls supported by donation of construction materials and finance.
- FUGs contribute in construction of Temple and Monastery.
- Stretcher bought and contributed in utensil purchase for community use.

Patle Sanne FUG is not only supporting village electrification, but also playing leading role in organising this and in liasing with the agencies concerned.

There are many other non-forestry activities undertaken by FUGs in the Koshi hills. Often these activities are known to DFO staff but remain unsupported, as DFO staff primarily address forest-related matters.

Most of these have benefited all wealth ranks equally. However in some FUGs the improvement of school facilities has had a greater benefit to rich members of the FUG who teach in the schools, and less benefit to poor households who can't afford to send their children to school as they are needed to look after animals.

*4.4 Improved Credit Opportunities ('***Financial Capital'***)*

The provision of financial capital is an *outcome* (the establishment of credit and micro credit schemes), and its availability to households, and uptake an *impact*. .

All FUGs have some fund level. Whilst some have generated significant amount, others have made little increase since formation. Some have mobilised their fund for social development, or have allocated for household loan for IGA, etc. Patle for instance has given financial support to sick people.

In Patle FUG resin collection has provided great deal of income to FUG and has provided employment opportunities to about 20 users for over 9 months of the year.

Fund in remote FUGs tend to be very small (e.g. in Nakla Daskhate FUG, Helebung FUG. The generation of larger funds generally depends on marketable products in forest, and a nearby market (e.g. Patle Sanne gets from resin sale high income, and Ramche gets revenues from Sal timber sale, as it is close to district headquarters where there is timber demand for construction). Ahale FUG is making money from seedling production in their nursery, which they sell to the DFO and other FUGs. In other groups without big fund depend on small levy from FUG members; fund generation in this way is much more difficult.

Generally the funds are being used to finance community development activities; esp. physical capital like drinking water, electricity supply etc. Dharma Devi is in the unusual position of planning to buy land to create a new forest, from its own sources: it has raised Rs.31, 000 in order to buy 10 reopen of land

Financial assistance is also being provided in some FUGs to those who suffer from accident and sickness (Patle Sanne, Sibhuwa Salghari and Ahale FUGs).

The organisation of savings and credit groups has also played an important role in household livelihoods where this has occurred. However only very few FUGs have moved towards mobilising their funds for micro-credit, (e.g. in Ramche FUG for goat keeping, piggery and other income generating activities), although this practice is certain to increase due to the high demand from users.

FUG support for improved household income generation is seen as a priority issue amongst forest users – the indicator was cited in 9 of the 11 FUGs (shown by the grey shading of the box). However 4 FUGs are performing to a 'medium' or 'good' standard in this regard. On the other hand many more are performing community development activities. In many of the FUGs studied forest users expressed a desire for a greater priority on household livelihood development activities than on community development activities.

Concerns have been raised by observers as to whether some groups' livelihoods have suffered under the Community Forestry regime. There are three main areas of concern. Firstly have some genuine users been excluded from membership of FUGs? This was found to be the case in only one of the 11 FUGs studied, and the group in question, blacksmiths were in negotiation to change this (and furthermore had a number of alternative sources).

The second are of concern regards whether restrictions on forest use disproportionately affect those groups who are most dependent of forests for their livelihood. In this study it was found that whilst in some FUGs poorer households had suffered from restrictions of product collection, particularly on fuelwood collection for sale, in fact the restrictions had usually not been strongly enforced, acting more as a mild disincentive than a ban.

Thirdly, whether the nature of local decision-making, given the stratified nature of village society, excludes the voices and interests of the poorer and more marginal. This is an important issue which certainly requires attention. Because decision-making is only inclusive of all groups in a small proportion of FUGs it is certainly the case that poorer groups interests do receive equivalent interest of the FUGC. The consequences vary between FUGs but can take the form of excessively high royalty charges for forest products, excessive membership levies, the forest management regime and mobilisation of fund reflecting the priorities of the wealthier members of the FUG.

The key to addressing these concerns is again the need for inclusive decision-making based on tole-level interaction. Field support staff are needed to educate FUGs in improved planning and decision-making practices.

4.5 Improved Human capital.

Successful policies can have a pervasive impact upon the development of human capital and hence upon the capabilities of individuals to secure their well being. The effects of the

development of human capital can be cumulative and multiplicative. For example, there may be established new organising roles for women on committees to oversee collective action, new savings groups, adult literacy classes etc. The development of human capital may also be linked to the freeing up of time by the provision of more accessible drinking water or labour saving technologies in agriculture, which in turn allow disadvantaged groups to spend time on the accumulation of skills, confidence and networks. The acquisition of new 'development knowledge' through literacy, the radio and personal networks is also important. Policies may have indirect (and often unintended) impacts in the longer term

Community Forestry has contributed to improving 'human capital' in a number of ways
Various training to FUG members provided by the District Forest Office have improved the skills of some FUG members: for instance in record-keeping, planning. Although this has often not made .a major improvement it has had some benefit.

There has been training to female 'Animators' by the NUKCFP in 2 FUGs studied – which had had a significant impact in increasing women's awareness, social role, confidence and empowerment

Community Forestry has also contributed to some extent in developing leadership abilities amongst forest users.

4.6 Increased Household Livelihood Opportunities

This is perhaps the most obvious and measurable impact of policy upon livelihoods. Indicators must address issues of wealth, gender and age. Policy impacts can be traced to the direct provision of new income opportunities, the enhancement of access qualifications (e.g. credit, skills, networks) and possibly in the pay-offs for each activity.

FUGs, as well as affecting forest product extraction for domestic use, have promoted a number of income-generating livelihood opportunities:

Four of the FUGs studied (Patle Sanne FUG, Ramche FUG, Dharma Devi FUG and Sibhuwa FUG) have been able to provide some jobs for poorer households. In Patle Sanne FUG, 22 households have got jobs as resin-tappers, and in Ramche, Dharma Devi and Sibhuwa FUGs jobs have been created as forest watchers, especially in the dry season when there is risk of forest-fire, and during forest product harvesting, and other FUG activities. In some FUGs NTFP collection and sale by users has been strengthened through the improvement in forest condition. (e.g. yellow berry from Bokre Danda CF)

In Patle FUG employment opportunities have emerged from resin collecting, organised by the FUG.

In some FUGs (e.g. Ramche) fuel wood sale by poorer households has been 'normalised' through registration.
In some FUGs the collection of fuelwood for commercial alcohol distillation has also been regularised (Ahale FUG)

There are five main areas that FUGs can support improved household income generation:
1. Focussed support for poor households to change from fuelwood selling to more sustainable activities
2. Organise skill-development training
3. Co-ordinate livelihood support activities of diffent agencies amongst user group
4. Creation of employment, through active forest management and engaging in marketing activities as an enterprise
5. Mobilise FUG fund for micro-credit

Process Indicator	FUG:
Key: ♦ *- good* ♦ *- medium* ♦ *- poor*	

	1. Bhaludh	2. Jalkini	3. Patle	5. Ramche	6. Dharma	7. Sibhuwa	9. Ahale	10. Paluwa	11. Nakla	13. Bokre	14. Helebun
Loans, support for improved Hh income generation	♦	♦	♦♦	♦♦	♦	♦	♦	♦	♦	♦	♦

Most FUGs discourage fuelwood selling, and fuelwood sellers are generally keen to change to more socially acceptable income generation activities. However they look to the FUGs for support, which is rarely forthcoming. In Paluwa Pikhuwa many former fuelwood sellers have changed their occupation, but complain that they have received no support form the FUG, and about 15 families still continue in fuelwood selling. In Ramche FUG on the other hand, fuelwood selling has been 'normalised'. As the capacity of the forest to supply fuelwood was great it has been brought under sustainable levels by the FUGs quota system.

Other agencies are working in FUGs to help poorer FUG members move away from fuelwood selling. For example in Paluwa Pikhuwa FUG the Women's Development Office has supported small-scale livestock raising, (without FUG support), which has been successful for about 40 households. FUGs are not so far supporting these sort of training programmes, but could easily co-ordinate these activities at the local level.

FUGs are often uncertain how much freedom they have to decide on how to spend their funds. They need to be unambiguously informed by Range-Post staff that they can engage in all aspects of community development as they see fit, and they may mobilise their fund to this end (subject to bylaws) and will still retain the support of the DGFO and Range-Post

In some FUGs employment opportunities have arisen for instance for resin collection in Patle FUG, for nursery naive in Ahale, Patle and others, and for forest watcher in some FUGs. However the potential for income generation opportunities is hardly being exploited by FUGs as yet. There exist a range of opportunities, particularly for forest product collection and processing, which few FUGs have so far explored.

There exists great potential for FUGs to mobilise their funds for micro credit, but so far FUGCs re reticent to take what they perceive as the risk. In all of the FUGs studied most users, and particularly poorer members, felt micro-credit was a priority need. They often had difficulty getting loans without collateral, and small loans to start income generation activities such as pig-rearing were seen as the most desirable uses of the FUG fund. However the committee members in many FUGs were hesitant about micro-finance as they were unsure how to administrate it, and did not fully trust the users to repay the loan. Since the FUGC tends to be dominated by wealthier people they are not so motivated for this innovation. There is also a lack of trust from wealthier users regarding poorer FUG members' reliability to repay loans. Only 4 FUGs of the 11 studied had embarked on micro-credit loan schemes for the poor.

A recent study by a micro-credit support agency in Nepal found 'FUGs were remarkably strong community-based organisations, with good leadership, management skills and systems, and loyal members.'[1] As such they had all the institutional requirements for providing savings and credit services, and in some cases they had the capital requirements as well. The main concern of the study was uncertainty in FUGs over what type of institution they are trying to build, whether they considered micro-credit activities as a priority.

From the current study we can confirm that many users are keenly interested in FUG funds becoming mobilised for micro-credit. The main obstacles are technical understanding of

[1] 'MF through Forest User Groups: a good fit?' in Common Interest (Jan 99) pp.7-8 SA/CRED (Kathmandu)

methods, and the building of trust in the FUGC that loans will be repaid. Currently there is a lack of willingness of FUGCs to risk default on loan; desire only to lend on collateral; e.g. Sibhuwa. FUGC members say they don't want to take the risk of loosing the money, as it is their responsibility to keep it safe.

Potential could be addressed through awareness-raising support, and support to plan and prepare scheme for poorer groups in community.

In most of the FUGs there is a lack of awareness over whether funds can be used to support household livelihoods or not, and often users believe the fund can only be used for forest and public works such as school or drinking water schemes.

Policy Implications
The greatest restraint on most FUGs is the perception that the FUG, as a body initiated by the Department of Forests, should restrict its activities to conservation-oriented forest management. Awareness raising regarding the many potentials for the expanded role the FUG can play is needed.

There is a great potential for FUGs to support local micro-finance facilities, which are in great demand. Currently FUGC are hesitant to initiate these activities due to lack of awareness and knowledge of methods. Outside technical support is needed to raise awareness of the possibilities and confidence of FUGCs to initiate schemes.

4.7 Other Indicators

Income (cash, goods and services).
Because most forest use has been based on subsistence, the main change in Income is improved flows in forest products, as discussed above.

Consumption.
This involves altered intakes of food in terms of quality, variety and calorific value as well as other items that may also be considered as investments (e.g. house improvements, purchase of bicycle or radio). It has been beyond the scope of this study.

Investments.
These are typically in productive capacity, education and skills and also in social capital. It is important to identify whether the investment decisions were reached on the basis of other direct and indirect effects of policy.

FUGs have provided a basis for collective investment in the community forest – natural capital, e.g. through protection, patrolling and planting.

Institutional Capacity
Community Forestry policy has sought to increase the local institutional capacity – through forming FUGs, which as we have discussed above have become important social capital to many households.

At the local level, a number of indicators suggest that the institutional capacity of the FUGs is generally good (the number of new institutions created, membership numbers through time, attendance, measures of participatory activity, qualitative information from focus groups upon politics of agenda setting and management and performance criteria)

At higher levels, interviews of key personnel in different parts of the Department of Forest administration (from First Secretary to Forest Ranger) suggest a process of capacity building is continuing in earnest, both through new formal procedures as well as informal practice, particularly at the local 'development interface'.

Vulnerability context.
Vulnerability is a hypothetical and probabilistic concept (Blaikie et al., 1994) and is an integral part of a livelihoods framework. One key challenge is that the full impact of vulnerabilities

cannot be understood by considering individual vulnerabilities in isolation, for it is the accumulation of multiple layers of vulnerability that is the real issue. The effects of some vulnerabilities (and especially of 'trends') are easy to assess, but others (such as natural disasters like landslides) cannot be directly verified until they actually occur. The ability to recover from shocks is an important element in assessing vulnerability. In many ways vulnerability is as much a matter of perception (and from this the actions take in response to a perceived threat) as it is about actual impacts.

Perhaps the greatest effect of Community Forestry on the vulnerability context has been to reverse the threat of a loss of forest product supplies. In FUGs where users have been highly dependent on the forest for daily fuelwood supplies (e.g. Ahale) this has been a massive improvement to both their day-to-day lives and their ongoing vulnerability context.

Forests can provide a valuable resource in times of difficulty. Poorer households can be highly dependent on them for supplementary income at particular times of the year, and an improved forest means reduced vulnerability to them, as the ability to sell fuelwood or NTFPs can represent food security.

FUGs have also provided a safety net through making provisions for emergency social security payments to members suffering from illness or catastrophe (such as house fire or earthquake damage). Micro-credit facilities also help reduce vulnerability.

Table 12.3 below gives a general characterisation of the sorts of changes in livelihood assets due to community forestry policy implementation. To give a more detailed picture, each aspect is discussed below.

Table 12.3: Indicators of Impacts of CF on Livelihoods: Livelihood Assets / Capital Improved?

	DHK			SSB				BJP		TTM		
	1. Bhaludhunga	**2. Jalkini**	**3. Patle**	**5. Ramche**	**6. Dharma Devi**	**7. Sibhuwa**	**9. Ahale**	**10. Paluwa**	**11. Nakla**	**13. Bokre**	**14. Helebung**	Total
NATURAL CAPITAL (forest) Improving?	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	11 /11
Improvement in forest product flows	no	yes	yes	yes	yes	yes	yes	yes	no	no	no	7 /11
Comment: product flows improving	*(No change)*	*Fuel-wood, timber*	*Fuel-wood grass*	*Timber, Fuel-wood, Agric tools, green Sal-leaves*	*Timber*	*Timber*	*Fuel-wood, Leaf-litter*	*Fuel-wood*	*(Forest not opened)*	*(Forest not opened)*	*(Restrictions on flows)*	
Security / sustainability of product flows in future	yes	?	yes	?	yes	yes	yes	yes	Yes / ?	yes	yes	9 /11
Other benefit flows from forest			*Job opportunities from resin*									*1 /11*
PHYSICAL CAPITAL improving	-	-	yes	yes	-	yes	yes	-	yes	-	-	5 /11
Water supply			*yes*			*yes*						
community hall			*yes*	*yes*								
nursery			*yes*				*yes*					
Support to:						*School*	*monastery*		*health-post*			
other		*stretchers*	*electrification*				*Trail*					
HUMAN CAPITAL Improving	yes	yes	yes	yes	yes	yes	yes	-	-	yes	yes	9 /11
Training	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*			*yes*	*yes*	
animator			*yes*	*yes*								
SOCIAL CAPITAL Improving	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	11 /11
FINANCIAL CAPITAL Improving	-	yes	yes	yes	yes	yes	yes	-	-	-	yes	7 /11
flows from fund: support to:		student	Youth-club, health	Employment, Hh loans	Hh Loan	school	Hh loan				-	

4.8 FUG Support for Community Development

Eight of the 11 FUGs studied have played an active role in community development, and were providing either material or financial support or both for community development.

Process Indicator ***Key:*** ♦ - good ♦ - medium ♦ - poor	FUG:										
	1. Bhaludh	2. Jalkini	3. Patle	5. Ramche	6. Dharma	7. Sibhuwa	9. Ahale	10. Paluwa	11. Nakla	13. Bokre	14. Helebun
Discussing, organising & supporting CD	♦	♦	♦	♦	♦♦	♦♦	♦	♦	♦	♦	♦

Various community support activities include:

- Community infrastructure Development such as: funding water supply, electricity supply, bridge building, community hall construction, trail-making, land-purchase to plant new forest
- Community support: such as financial and timber support to schools (and awards to students), health-post, community groups such as youth clubs.

It is clear from group discussions that users see the institutional forum of the FUG as a means to address wider development needs in the community than just the forest-related issues. One of the main constraints on FUGs become more involved in community development is that the DFO tends to concentrate on the forest-related aspects of FUGs and imparts upon them a sense that their role should be limited to forest-related activities. Some FUGs are hesitant to move into a wider development role, and are unclear whether funds should only be used for forest related activities.

Five FUGs identified a wide variety of actions for community development as part of their Micro-Action-Plans:

- The building of a community hall was initiated by Sibhuwa Salghari
- Support to schools and clubs, through funding and granting timber was increased by Patle FUG.
- Four FUGs sought to initiate or continue literacy classes of which two were successful
- Four FUGs sought to initiate vegetable-growing of which two were successful
- Three FUGs sought to improve water supplies in the village, of which two were successful.
- Two FUGs sought to develop skill-based livelihood activities through training – such as weaving, furniture-making etc.
- Three FUGs developed Saving and credit and loan schemes.
- Analysis of Impact on separate livelihood groups

5 Livelihood Impacts of Community Forestry on the Poor

Poor households in the mid-hills are generally caught in a cycle of poverty and vulnerability. They typically have very few physical assets and productive inputs of their own, and what they have are of poor quality (e.g. land, irrigation, plough, manpower). For this reason their production and income is often below their consumption / expenditure level. To cope with this situation, in the absence of savings the most common recourse is to take loans from moneylenders for their ongoing consumption needs. This step is the key cause of the cycle of poverty, as interest rates are very. High, and if productive assets such as land is offered as collateral they are vulnerable to being lost. The high interest charges feed back into lower income available in the future and the cycle of poverty is perpetuated. Poor people have few options. Indebtedness to moneylenders within the village compromises poor people's ability to negotiate in community meetings, as they can't speak against their patrons without risk.

Poorer households have a mixed experience of community forestry.

- Since the decision-making process is often dominated by elites, the wishes of the poor are often neglected, for example in forest closure decisions. For example, in Nakla Daskhate FUG (site 11) we found that the poor people had the tradition to use a forest patch of Katus Chilaune forest for a seed bed (called *Bhasme Phadne*) to raise millet

seedlings. Villagers adopt this practice to use forest's organic matter as fertiliser for the seeds. That practice has been stopped by the FUG since its formation.

- Poor households of Ramche FUG (site 5) depend on the community forest for their livelihood, because they sell fuel wood to Khandbari Bazaar, the district headquarter of SSB on a daily basis. They have experienced restrictions on their livelihood activities since FUG formation.
- Blacksmiths don't get sufficient charcoal and other supplies of forest in many of the FUGs studied (for example, in Jalkini Katlar (site 2), Ramche Sunkhani (site 5), Nakla Daskhate (site 11) and Helebung (site 14).
- 21 poor people (users of Patle Sanne) have been employed by the Herbal Production and Processing Company (HPPC), a government company, as wage labourers to perform the resin tapping work. The FUG has not been able to communicate with them on technical matters of resin tapping or to maximise benefits from this business.

Poorer groups' experiences have generally been that they have had little influence on FUGC decision-making and have often had their interests neglected

The evident improvement in forest condition observed in the 11 FUG sites does not come without an entailed 'cost' in terms of restraint on use of the forest. The burden of restraint is borne disproportionately both within and between households. This is due to the different degree of dependence of households on the forest, and members' different task responsibilities within the households. While restricted access may only be for the first few years of the FUG this can have a great impact on the household's access to fodder sources and therefore ability to keep livestock. For example in Bhaludhunga one farmer interviewed previously kept over 15 goats but now could only manage to keep 4 – 5. Collection of firewood from a forest 2-3 hours away, rather than ½ hour away has a great impact on women's time and work burden, likely to translate into negative health effect for both women and children. Wealthier households often have access to alternative private resources, whereas poorer households are most dependent on common property resources for their livelihoods.

6 Conclusions and Policy Lessons

'Livelihood Forestry' may be considered as '4th generation forestry'. Livelihood forestry implies that the focus of policy is changed from resource-centred to livelihood-centred. The 'Community' is not merely occupied with passively conserving the resource in return for modest flows of subsistence forest products, but the forest is dynamically mobilised for livelihood development in a variety of ways.

The Forest Department has yet to re-orient itself at an institutional level to the new rural situation. Not only has the forest become a valuable resource, but also the FUG institution itself has become a valuable social capital resource, which is in a key position to utilise the full potential of the Community Forestry initiative for maximising livelihood benefit to local people. In this sense we can say that forestry in Nepal is certainly on the threshold of its 'fourth generation': 'livelihood forestry'

Currently DoF policy regarding FUGs emphasises the forest resource – its protection, regeneration and improvement. Community Forestry Policy is as yet unfocussed regarding how livelihoods could be directly addressed and supported. There are no specific provisions regarding poverty alleviation, and although there are provisions for promoting gender equity (i.e. women on committee proposed to be 50%) in practice this is as yet hardly implemented, and there is a lack of awareness or monitoring. Though 75% of FUG income can be allocated for non-forestry work there is poor awareness in FUG about how to mobilise their often substantial funds.

Under the prevailing circumstances of extreme rural poverty in the mid hills, there are many opportunities for rural livelihoods, particularly of the poorest and for gender equity, to be augmented through Community Forestry. If livelihood development was to become a priority perhaps 75% of the FUG fund could be spent on household livelihood development. There are opportunities to develop forest product collection, processing and marketing, to develop

the livelihood skills of forest users, to provide micro-credit to them, to promote empowerment of women and marginal groups, to provide emergency funds for crises and so on.

In order to realise the potential of livelihood forestry, systematic examination of the actual needs or rural households is needed, what opportunities exist and how policy may support their fulfilment.

7 Bibliography

Solon, L Baraclough and Krishna A. Ghimre (1995) Forests and Livelihoods (UNRISD / Macmillan: Hampshire)

Graner, E (1997) Political Ecology of Community Forestry in Nepal (Vertlag fur Entwicklungspoplitic: Saarbrucken)

Maharjan, MR (1998) Flow and Distribution of Costs and Benefits in the Chuliban Community Forest, Dhankuta District, Nepal (ODI: London)

Malla, YM (2001) Impact of Community Forestry on Rural Livelihoods and Food Security in Nepal in Unasylva 202 (FAO:Rome)

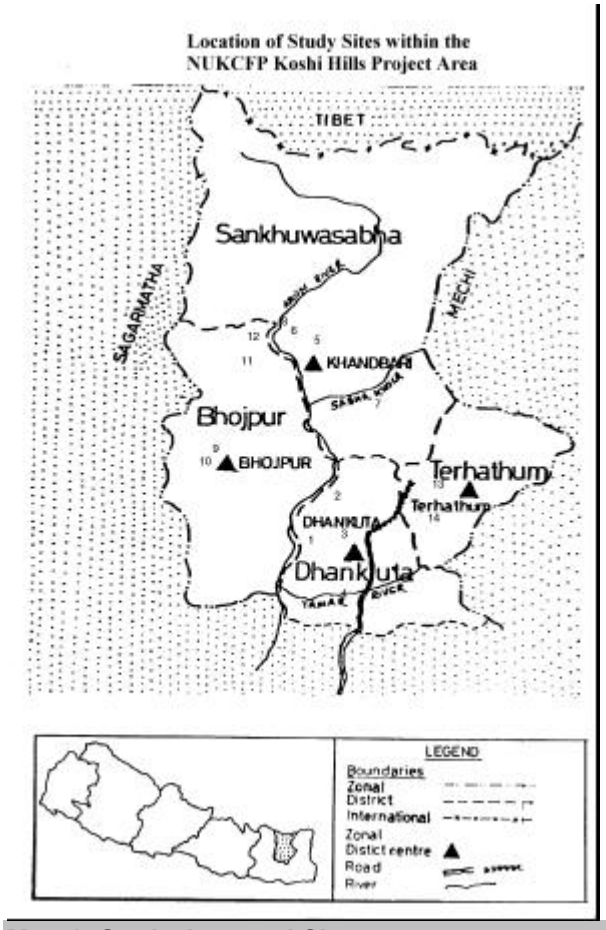
Hamlet-based Micro-Action-Planning: A Tool for Improving Forest User Group's Decision-Making and Forest Management

Springate-Baginski, Oliver, Om Prakash Dev, Nagendra Yadav, John Soussan

Acronyms

BJP	Bhojpur District
NUKCFP	Nepal UK Community Forestry Project
CF	Community Forestry
DFO	District Forest Office
DHK	Dhankuta District
DOF	Department of Forests (His Majesty's Government of Nepal)
FECOFUN	Federation of Community Forestry Users of Nepal
FUG	Forest User Group
FUGC	Forest User Group Committee
HMGN	His Majesty's Government of Nepal
IGA	Income Generation Activities
PMUML	Communist Party, United Marxist Leninist
RP	Range Post (local Department of Forest office)
SSB	Sankhuwasabha District
TTM	Terhathum District
VDC	Village Development Committee

About the Project:
'Community Forestry in Nepal: Sustainability and Impacts on Common and Private Property Resource Management' **University of Leeds / NUKCFP Collaborative Research Programme**
This paper presents findings from a 3 year research project, funded by DFID through its Natural Resources Systems Programme, and was undertaken by University of Leeds Environment Centre in Collaboration with Nepal UK Community Forestry Project, and NRI.
It investigated the fundamental processes involved in Community Forestry: FUG institutional development at the local level, their impacts on the forest resource, and on farming systems and livelihoods.
The research project ran over 3 years between 1997-2000. The project used a Participatory Action Research methodology, across 11 Forest User Groups (or FUGs), and 3 non FUGs, in 4 hill districts of the Koshi Hills Zone in Eastern Nepal. This involved group level discussions, participatory resource assessments, household interviews, and discussions with a variety of stakeholders at different levels.



Map 1: Study Area and Sites

The study sites were chosen to reflect the great diversity of physical and social and institutional conditions. Throughout this paper case study reference is made to these 11 FUGs, which are as follows:

14 sites were selected for study, involving 11 FUGs and 3 non-FUG sites for comparability, to reflect a variety of different characteristics: district, accessibility, forest area and type, forest condition, number of users, and age. These are shown in the following chart:

Table 1: Characteristics of Study Sites.

Site No.	Site Name	Dist-rict	Accessibility	Forest Area (Ha)	Forest Type				Forest Condition	Number of House-holds	Forest area / Household (Ha)	Year of FUG formation
					Pine	Katus-Chilaune	Sal	Other				
1	**Bhaludhunga**	DHK	Accessible	23.0	-	K-C	-	-	Fair	105	0.22	'96
2	**Jalkini Katlar**	DHK	Medium	213.5	pine		Sal	-	Poor	119	1.79	'93
3	**Patle Sanne**	DHK	Accessible	147.1	pine	K-C	-	Utis	Good	287	0.51	'94
4	**Chimsuwa (non FUG)**	DHK	Medium	-		-	Sal	Hade, Dangero	Poor	*64	-	'98-'99
5	**Ramche Sunkhani**	SSB	Accessible	129.1	-	-	Sal	-	Good	132	0.98	'92
6	**Dharma Devi**	SSB	Medium	10.0	-	K-C	-	-	Fair	53	0.19	'91
7	**Sibhuwa Salghari**	SSB	Remote	107.6	-	K-C	Sal	Utis	Good	117	0.92	'93
8	**Heluwa Besi (non FUG)**	SSB	Remote	-	-	K-C	Sal	-	Poor	*65	-	'98-'99
9	**Ahale**	BJP	Accessible	24.0	-	K-C	-	Utis	Good	69	0.35	'90
10	**Paluwa Pikhuwa**	BJP	Medium	104.9	pine	-	Sal		Good	121	0.87	'93
11	**Nakla Daskhate**	BJP	Remote	34.5	-	K-C	-		Poor	140	0.25	'95
12	**Nepale Danda (non FUG)**	BJP	Remote	-	-	-	Sal	-	Poor	*125	-	'98-'99
13	**Bokre Danda**	TTM	Accessible	31.0	-	K-C	-	Alnus	Good	188	0.16	'89
14	**Helebung**	TTM	Remote	31.5	-	K-C	-	Alnus	Fair	151	0.21	'93
	Mean:			77.9						135	0.58	

**Note: Estimated number of households for non-FUGs*

Accessibility was classed according to whether FUGs were less than 1 hour from District HQs (accessible), between 1-2 hours (medium), or more than 2 hours (remote) – a conventional approach in the Mid-hills.

Forest condition assessment was reached by both research team and forest users, according to density of stands, forest product availability and level of regeneration.

The method used was a 3 yr – action research approach incorporating biometric and participatory resource assessment

Summary

Community Forestry in Nepal has in many ways been a great success story. Since the widespread formation of Forest User Groups started 10 years ago many have now consolidated their role as resource management institutions and are branching out in to wider developmental activities. District Forest Officers are overwhelmed with continuously growing demands for support both relating to forest management and other new areas outside the Department of Forest's remit.

However most FUGs remain institutionally weak, due to poor or unstructured processes for user participation in planning, decision-making and implementation. This widely leads to group inertia, elite domination by default, and the marginalisation of the interests of weaker social groups. Furthermore, many FUGs remain in a dependent 'parent-child' relationship with their local District Forest Office, in terms of both awareness to roles and responsibilities support and, reliance for support.

These problems are not unique to Nepal, but are prevalent throughout the international participatory forestry movement **(see Brown, 1999)**, and indeed across other sectors in participatory resource management such as watersheds. This paper examines one way of reversing FUG's dependency on the Forest Department, by initiating a local process for bottom-up planning and action. This involves formalising forest users' involvement in planning, decision-making and implementation. This method, when piloted at 11 FUGs, brought major transformations in less than a year. It was found to be very effective in reversing elite-bias in decision-making, mobilising consensual collective action, and promoting the development of equitable livelihood and community development initiatives. The micro-action-plan motivated the FUG to become 'demand-driven' in its dealings with the DoF, and also widen its scope of activities to pull in services from other district agencies.

To achieve such positive outcomes a level of intensive facilitation support was required from the research team at the outset. The implication for policy is that if FUGs are to fulfil their potential for development, short intensive inputs of field-level facilitation support are required to 'energise' them. This could be provided by Range Officers, although it may be more realistic to expect that civil society groups are in a better position to provide it.

Community Forestry is often referred to as a 'process', and this tool is suggested not as a once and for all panacea, but as a possible next step in this evolving process.

1 Introduction

Community Forestry has been a great success in the mid-hills of Nepal, in both reversing forest degradation and ensuring household's subsistence forest product needs are met on a sustainable basis. This has been achieved, mainly since the breakthrough 1993 Forest Act, through the formation, by the Department of Forests field staff, of local Forest User Groups (FUGs) - forest management institutions which are given the responsibility to manage the adjacent forests. FUGs have spread throughout the mid-hills – at recent count almost 10,000, and formation is proceeding at almost 1000 per year.

At the time of formation the FUG 's operational roles and internal procedures were kept simple, to ensure FUGs could 'take-off' safely. At that time the Forest Department's primary objective was forest resource protection and improvement, and FUGs have generally been very successful in fulfilling this. Now many FUGs have consolidated their initial take-off, and have wider expectations and ambitions. Forest users are eager that FUGs might help their livelihood development in a variety of ways.

FUG institutions have the potential to evolve both into more active forest management activities, and also into a broader dynamic local development body, to function as a grass-roots development planning and implementation body.

Over the last decade, rural development activities have exploded, as local institutions like FUGs, as well as NGOs and donor's activities have proliferated. However NGOs' and donors' development support has often been according to their own programmes and priorities, and not to those of the local people. Many local people feel a degree of ambivalence about being 'conscripted' into these various outside programmes.

FUGs are now established as a permanent grassroots local institution, and are in a key position to assume the role of co-ordinating local development activity down to the *tole* (hamlet level), according to local people's own priorities. Many FUGs already informally link with Village Development Committees (VDCs) – the lowest level of local Government. In the future this role can become formalised.

Although some FUGs already illustrate these potentials, Leeds / NUKCFP research shows most FUGs are currently constrained from achieving these potentials by three key factors:

1. Static internal processes and procedures: forest working plans, rules, fines and so on are set at the time of formation in the Operational Plan, and are difficult to formally modify. The function of the institution then becomes perceived as merely implementing these pre-set decisions
2. Weak planning, decision-making, and implementation: There is no system for properly eliciting the needs and wishes of all members. Often this leads, by default, to 'elite-domination': the FUG committee taking decisions on their behalf. The marginalisation of women's' and poorer groups' interests is prevalent.
3. Poor awareness, amongst both the general body of users and FUG Committee members, over Community Forestry concepts, roles, responsibilities, and procedures.

The consequences are disaffected users and FUGs functioning below their optimum.

A number of measures may support FUGs' shift to a more dynamic development orientation. One which has been found very effective is a tole (hamlet)-based Micro-Action-Planning process. This was tested in 11 FUGs as part of the Leeds / NUKCFP research programme, conducted in the Koshi Hills in Eastern Nepal over the period 1998-. One of the key findings of the Leeds / NUKCFP research is that once an improved planning, decision-making and implementation process is facilitated within FUGs, FUGs showed rapid and sustained development, according to their own terms. Indeed after the initial support input FUGs need for outside support may even decline, as they become able to identify and implement their action priorities. The implementation of many action points identified by FUGs did not require outside support, as FUGs were able to rely on their own abilities and resources.

FUG Planning based on the tole (or hamlet) is essential, as FUG users have been identified on the basis of their traditional use of forest, and proximity to the forest. The boundary of ward, VDC and district has not acted as a restriction. This has ensured that all FUGs reflect the actual users of the forest, irrespective of their administrative location. This has been beneficial in providing the proper basis for management of compact forest areas, but has the side effect of often leading to large groups, which are difficult to manage, communicate within, and reach decisions. Most larger FUGs have recurrent difficulty in managing users group: information dissemination, decision-making, assembly meeting, conflict resolution. Hence responsibility goes by default to committee members who are then easily able to manipulate matters for their benefit if they so desire. Users are often not aware of who the other users are.

Thus users are merged as a 'constructed community' which has no prior collective status in village, and so lacks cohesiveness, and has only loose ties across communities and ethnic groups. Distances between users may be many miles, leading to practical difficulties. There are also inequalities across users livelihoods. Under these circumstances almost all FUGs are trying to make the FUG effective in managing forest and distributing forest products to users. However in order to reduce the challenges associated with decision-making in large groups, there is a need to increase active participation level of each user.

FUGs are constituted of a number of toles. At the tole level there is traditionally a high level of homogeneity. It is here that the actual community exists. Toles have a number of strengths which can be tapped in order to improve FUG institution and functioning:

- Ethnic homogeneity leads to social cohesion and strong bonds between members.
- Geographical proximity leads to ease of regular informal interaction.
- Women can interact regularly in evenings

- Often poverty in FUG is focussed in particular toles
- Specific common interests exist in different toles and provide basis for interest groups.
- Other agencies are working at tole level: NGOs
- FUG executive committees are already selected from each tole.
- Tole interaction can serve as a basis for wider livelihood development and planning

Decision-making in FUGs needs to be based on tole-level priorities if it is to democratically represent the wishes and needs of all the forest users, and not just an elite. FUGs were formed on the basis of forest, and are mostly very large social groupings. This can lead to problems in decision-making. Unwieldy decision-making practices in these large groups can lead, by default, to chairman or committee setting of the agenda as a way to structure debate. 'Ownership' of the FUG, and the setting of the FUG agenda needs to be with the 'actual community' i.e. at the tole-level.

FUG support structures (e.g. DoF, bilateral projects, other line agencies) can base their support to FUGs on the needs FUGs themselves identify through MAP process. This process can form part of an overall change in the support relationship. Up to now the DoF has sought to achieve its objectives of resource conservation through the participation of forest users, through the FUG. In the future the FUG can become an institution through which local people achieve their livelihood development objectives, one of which is forest resource development, through engaging the participation of support providers, one of which is the Department of Forests.

2 Constraints and Opportunities for FUG Planning

FUGs have been formed according to a standardised process. DoF Range Post staff visit the area, identify the 'actual' forests users are, and with them draw up an FUG Constitution and Operational Plan, according to a standard format. Responsibility for management of the local forest is transferred to the users, on terms laid out in the Operational Plan. Leadership of the FUG is the responsibility of the FUG Committee who are elected at this time.

The FUG The developmental role of the FUG holds great potential, as it has provided a locally-based forum for decision-making and planning. The most developed FUGs illustrate this potential through both active forest management and product distribution, as well as community development activities such as school building, drinking water provision and maintenance, micro-credit schemes, village electrification etc. However many FUGs are not able to reach this level.

2.1 Current Weaknesses of FUG Planning, Decision-Making and Implementation

The 1990's have been a period of FUG formation and consolidation, and now most FUGs have achieved a stage of 'passive' forest protection, but are not using the forest resource optimally – which would require more active forest management planning.

Major potentials exist for the further evolution of FUGs not only in forest management but also to broaden their activities into community and livelihood development, as many users would like. However most FUGs are constrained from achieving them as they suffer from structural weaknesses. The fundamental weakness (observed across virtually all the FUGs studied) is in their planning, decision-making and implementation process.

The current planning, decision-making and implementation system is based on planning through Operation Plan and Constitution documents, decision-making through General Assemblies (decisions recorded in record books) implementation through FUG committee.

The system is in practice ad-hoc and based on a passive resource management model, and on external top-down bureaucratic regulation model. It is not based on user development and empowerment model

The District Forest Office, which supports and monitors the FUGs, is given a budget ceiling to spend in each year, and on this basis plans FUGs support. Unfortunately budgetary considerations and training capacity can come before FUG's actual need in support planning.

Planning

One might expect that FUGs have a system of involving all the forest users in preparations for annual meetings, for instance by inviting issues for the agenda. One might further expect some assessment of user's needs and wants from the forests, how well, and how best to harmonise these with the productive capacity of the resource, in the light of the silvicultural techniques available. Currently there are no formal systematic planning processes prescribed for FUGs. Current policy emphasis in Nepal is upon government-formatted 'Constitution and Operational Plans' as a guide for FUG activities. These documents impose a static 'blue-print' on FUG activities, and are difficult for FUGs to modify in practice.

The Operational Plan's title is misleading, as they are not actually plans, but conceptual documents, which address the technical forest management issues for the forest in question. They don't provide a basis for inclusive community planning, and consequently they are commonly disregarded by forest users and FUG committees as the FUG develops, even though they are legally-binding documents.

The lack of proper planning is a major block to the real participation of forest users. FUG internal planning practices which occur to fill the gap tends to be ad-hoc, informal, or non-existent.

Decision Making

Decision-making processes are based on general assemblies (usually held every 6 months to one year) and committee meetings (usually held every one to two months). General assemblies discuss and reach agreement on activities for the year ahead. Assemblies can be large meetings and so agenda setting is usually done beforehand by the committee. Ideally (according to byelaws) the FUG Committee is constituted of representatives, both make and female, from the different hamlets making up the FUG. This might allow the views of different hamlets to be incorporated in the agenda. However in practice committees are frequently dominated by elites from particular toles, and so elite interests can prevail.

FUGs often agree to perform activities other than solely forest-related. The Operation Plans of FUGs only specify the forest-related activities the FUG is committed to performing. The Operational Plans are created at formation, and are seen by the forest users as legal documents rather than working documents to be used as an ongoing guide to activities. Over time FUGs change their priorities in forest management, as well as in other areas.

The procedure for modifying the OP is that it is redrafted and submitted to the DFO for approval. In practice this is a lengthy bureaucratic and is often held up in the District Forest Office. Consequently in practice FUGs often do not notify the DFO of changes in their management of the forests. The most effectively functioning FUGs encountered in the Leeds / NUKCFP study had no OP whatsoever!

Informal planning, though better than none, does not challenge elite control of the FUG agenda, nor does it provide any process for involving the marginal and more needy members of the community.

Implementation
Of FUGs studied many decisions that had been taken in Assemblies had not been properly implemented. Overall FUGs appear to have weak implementation.

Decisions taken are entered in the FUG record books, but responsibility for implementation is frequently not allocated. FUG record books shows that often the same decisions (for instance forest clearing, plantation, blocking, the setting of royalty rates, fines etc.) are taken by FUGs in meeting after meeting – indicating that they are not being properly institutionalised or implemented.

Poor planning and decision-making practices (ad-hoc, informal or both) within FUGs are a major constraint to realising their potential for planning and implementing more effective forest management, forest product distribution, and wider community development activities.

2.2 Directions for the Future
In order to improve FUGs performance in decision-making, planning and implementation a number of changes are urgently needed.

From forest-only activities to holistic livelihood development activities
Currently DFO staff are mainly concerned with supporting the FUGs' forest-related activities. However forest users have many other needs, relating to their livelihoods. The FUG institution can be being used for wider community development as well as forest management.

In existing policy the DoF is not envisaged to support wider community development, but FUG community and livelihood development activities can be supported, and need not be restrained by the DFO planning system, which would represent control of the FUG from above.

From a static to a dynamic planning and action orientation
Currently formal planning procedures in FUGs are based on a static model: the implementation of the Operational Plan. The Operational Plan and Constitution are generally used by Forest User Groups as ‘static’ strategy documents. FUGs generally don’t have ongoing ‘dynamic’ development plans. Record books are used as the ‘institutional memory’ from meeting to meeting, but this is a very weak system in practice.

More successful FUGs often do not use this model, but depart from the OP and just make annual year-to-year plans for their activities. This can make the FUGs more dynamic (in terms of responding to the changing needs of the forest users). However to avoid the danger of *ad-hoc* FUG activities, action planning needs to be in the context of up-to-date and relevant OP&C.

From centralised committee agenda-setting and planning to inclusive tole-level agenda setting and planning
Currently the ‘community’ in Community Forestry is poorly conceptualised, and processes neglect the actual community, which exists at the *tole* (hamlet) level. FUGs are made up of a group of *toles* sharing the same forest, and so are constructed communities. This model not explicitly address the differences between *toles*, in terms of ethnic group, livelihoods, wealth and so on. The issue of relative power across groups is not resolved, there are no safeguards against marginalisation. Many critiques of community forestry raise the valid concern that local elites will take advantage of the new situation, at the expense of the poor.

There is a fundamental gap in the general understanding of the nature of the FUG decision-making process: it is widely believed that all people can and should sit together and take decision by 'consensus', voting for candidates by clapping. Only in some FUGs is genuinely consensus decision-making the normal practice in the FUG assembly. More commonly decision-making is dominated by the FUGC, or even just by the chairman and secretary, who can set the agenda and define the issues to be decided upon. Elite domination of FUGs is not inevitable, but where there is poor awareness amongst users, and poor procedures, responsibility for handling the day-to-day management often befalls those prominent figures in village society by default, who often seek to 'make it worth their while'.

Without formalised decision-making practices based on inclusive tole-level interaction. the needs and wishes of only some of the users are considered, and the agendas for assembly meetings are set by a small number of forest users.

Where there is a good awareness level amongst FUG members, and where there is strong outside support, FUGs can become equitable and inclusive.

From weak to strong implementation practices
Currently the main forums for FUG decision-making are assembly and committee meetings. In many FUGs a weakness in decision-making and planning has been observed: many decisions taken in committee and annual general meetings are not effectively implemented. Implementation is weak due to a lack of effective planning and allocation of time-based responsibility.

From Supply Led to need-focussed demand-led support relationships
The existing planning system is led by DFO priorities. At range-post level FUG meetings, and district-level meetings, progressive bottom-up planning processes are being facilitated by DFO staff, but at the FUG level the concept of bottom-up planning is lacking. Bottom-up planning processes have not reached FUGs, and FUGs do not 'own' this process at present.

As FUGs currently lack their own Action Plan, the achievement of FUGs annual activities, as specified in DFOs annual plan, are limited. Current this 'Bottom-Up' planning is lead by budgetary concerns of DFO As DFO staff are supporting mainly plantation and nursery this narrows FUG activity to forest-related roles, but FUGs have many other needs.

Each FUG develops in a unique way according to its own pace, and each FUG requires appropriate support in order to evolve. The nature of that support must reflect the FUGs specific needs at that time. FUGs need to be able to identify their support needs and convey them to the appropriate agencies in order that support agencies may co-ordinate their support to FUGs.

During this research project a 'Micro Action Planning' process was developed and tested, in order to address these needs.

3 Co-ordinating Local Development Planning - from the Bottom Up

Rural development is an overwhelming priority in the mid-hills of Nepal, where a harsh environment, inaccessibility and lack of infrastructure and facilities combine to create some of the lowest poverty indicators in the world. Since the restoration of democracy in 1990 development efforts, projects and organisation have proliferated. However there has been a lack of co-ordination, a replication of capacities, and often a 'top-down' prescriptive approach, lacking attention to local development priorities.

There is a pressing need for a co-ordinated approach to rural development in Nepal, to harmonise the support agencies can provide with the expressed needs of the local people, particularly the most needy.

Principles of local autonomous development planning were accepted by the high-powered Decentralisation and Local self Government Commission (HMGN) in 1996, and were incorporated into policy in the Local Decentralisation Act (1999).

There is a need now to ensure local decision-making accords with these policies. Decision-making must be formally inclusive of all local groups. Planning must ensure decisions are put into action – allocation responsibility for time-based implementation

Action planning must be a dynamic and interactive ongoing process. Paulo Friere in 'Pedagogy of Oppressed' provided a simple action / reflection / action model:

- need identification,
- negotiation and consensus-building over action to be taken,
- decide on and plan course of action,
- implement action,
- return to identification of new needs, and repeat process.

There are currently four main decision areas for FUGs:

1. forest protection / setting fines
2. forest product distribution
3. fund management and utilisation
4. development initiatives

There could be many more activities – as has been reflected in the outcome of MAP exercises held in FUGs studied. If FUGs are given exposure and facilitation support beyond the current DFO system (which is led by budgetary planning imperatives) they can achieve much more. Many different activities could proceed in FUGs which don't involve money or budget, for instance improved user identification

4 Micro-Action-Planning: a Process for Improving Community-Level Planning

FUGs are recognised to face serious challenges in collective planning and decision-making. FUGs were formed on the basis of common forest use, and are mostly very large and heterogeneous social groupings. Unwieldy decision-making practices in these large groups can lead, by default, to chairman or committee setting of the agenda as a way to structure debate.

To address inclusive, systematic and formalised planning processes are needed:

- '**Ownership**' of the FUG and the setting of the FUG agenda needs to be with the 'actual community' i.e. at the *tole*-level. Already many FUGs have tole-representatives in FUGC, so tole-based micro-action-planning can evolve easily from current situation.

- *Tole* (hamlet)-based planning **promotes more inclusive decision-making**, as it can articulate the wishes and needs of all the forest users, and not just an elite. The more marginalised users can feel a lack of confidence to speak out in large assembly meetings, but can express themselves more freely in small hamlet groups. These expressions can then be conveyed to the FUGC. When the General

Assembly meets, if tole groups sit together they can support each other and negotiate more confidently

- A Micro-action-planning process can clarify the **specific development needs** of each *tole*. It can improve communication within the FUG, and improve decision-making and implementation.

- Micro-action-planing at the tole level is a process which can help **broaden the role** of FUG from a predominantly forest-related institution to a wider community development role. Different toles tend to have different priorities, and this process renders these explicit and promotes open negotiation. Micro-action-plans promote decentralisation within FUGs. The planning of different aspects of local development can be more effectively integrated in tole-meetings.

The 'micro-action-planning' process has been developed and tested successfully, and is illustrated in Figure 1. The main points of the process are as follows:

Forest User Group Micro-Action Planning – the Suggested Process

- Initially the FUG Committee meets to agree on the procedure to be followed. It is important that the FUGC is constituted of representatives from each of the main tole groupings. It is best if both male and female representatives are involved. Where the FUGC is not so constituted it will need to address this and re-constitute the Committee to fulfil this condition.

- *Tole* representatives call *tole* meetings, (male and female separately if possible / preferred). Where there are particular occupational groups (such as blacksmiths and fuelwood sellers) living across a number of toles it is probably also in their interests for them to meet separately to discuss their needs and aspirations regarding the forest, FUG and community.
- *D*evelopment priorities are discussed. Needs and wishes, both specifically from the forest and also in other areas are identified.
- A plan of action points is drafted in each group. Some points may be dealt with within the tole-group. Some points refer to issues to be dealt with at the FUG level

- The *tole* representatives then meet together in a committee meeting to and compile the FUG-level plans. The initial negotiation of conflicting wishes, and building of consensus can be facilitated at this stage, and an Assembly meeting agenda is drafted.

- An FUG General Assembly is held. Each *tole* briefly presents it plan, then the FUG Committee presents a provisional compilation of plans, and a suggested agenda for negotiation.
- Through discussion and negotiation a FUG-level Micro-Action-Plan is formulated.
- FUGs may wish to revise their Constitution and Operational Plans
- Responsibilities for implementation are allocated. Some action points can be dealt with within the group, others require outside support.

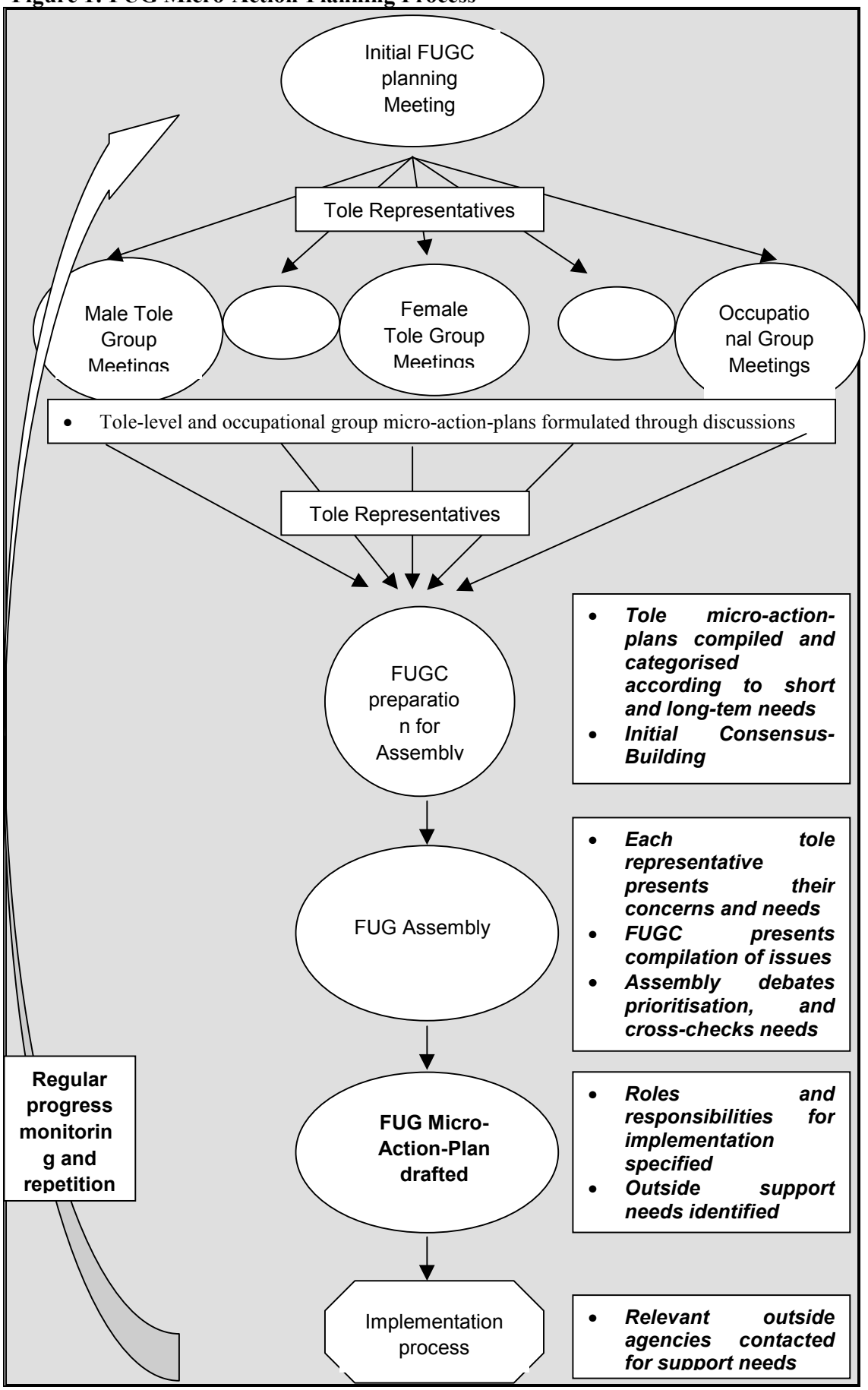
- The Action-plan is shared with the Range-post staff and other agencies, where specific action points require outside support.

- Revisions to the Constitution and Operational Plan can be presented for approval at this point
- The Range-Post, furnished with specific support needs of each FUG can then plan and target support effectively.
- Village Development Committees will be able to plan development support more clearly on the basis of needs expressed by the toles.
- District Development Committee and District-level development support agencies will be able to plan focussed development support on a need and demand-led basis.

- The process is repeated when the FUG is ready to review progress and identify new action-points. The review of progress can also be a self-monitoring exercise

Support Needs: The initial need in order to promote this process is outside facilitation, for example from the DoF field staff or project support staff. Their role is just to facilitate, and not to intervene in discussions on content and the agenda. They may be called upon to provide technical advice.

Figure 1: FUG Micro-Action-Planning Process



5 Micro-Action-Plan in Practice – Outcomes from Field Experience

The Micro-Action Planning process described above was piloted in 11 FUGs as part of the research project.

During the first-year research visit, the Micro-Action-Planning process was facilitated MAPs at each of the 11 FUGs, and plans were drawn up. Over the next12 months the FUGs then sought to implement these plans. After a year had elapsed the FUGs ware visited again and progress was assessed.

The action points identified were seen as priority issues requiring urgent attention. The contents of the action-plans mainly emphasised simple local actions.

The Micro-Action-Planning exercise led to significant transformations in the performance of the FUGs within a year. Most action points were relatively easily implemented and few required outside support. Of all FUGs studied, over two thirds of action points identified had been implemented after one year had elapsed, by the time of the second field visit in spring 1999.

The activities that have required outside support (especially conflict resolution, boundary clarification and OP&C revision) have been the least successfully implemented, due to the poor support provided.

The impact of Micro-Action-Planning in practice:

- Elite-bias in decision-making is reversed, mobilising consensual collective action, and moving decision-making from ‘Chairman Forestry’ or ‘Committee Forestry’ to ‘Community Forestry’ status.
- Different needs of users are being assessed and addressed by the FUG: Different groups within the FUG (e.g. from different toles) have begun to be involved in setting FUG general assembly agenda, actively contributing their priorities to discussion. Empowerment of poor and marginalised groups is occurring: they have begun attending FUG meetings and challenging the FUG committee to consider their needs and wishes.
- Equitable livelihood and community development initiatives
- Implementation of FUG decisions has become more effective, and has led to improved forest resource management, and many other community development activities, such as irrigation and drinking water supply, micro-credit
- Actual skills of local residents have been identified and mobilised through planning. Actual training needs have been identified.
- The FUGs have become more motivated to be 'demand-driven' in its dealings with the DoF, and also widen its scope of activities to pull in services from other district agencies. FUGs were able to distinguish what they could achieve for themselves, and were able to pull in from outside the support they need, not just from the DFO but other agencies as well
- More development-oriented relationships between FUGs and Village Development Committees (local governance bodies) are evolving on the basis of development planning.
- A more genuine ‘bottom-up’ demand-driven development approach is promoted.

Considering the different action points arising from the MAP exercise in diffent FUGs, there is a clear pattern: FUGs at diffent stages of their development are pre-occupied by different sort of issues issues. Less developed FUGs are pre-occupied with basic

Table 1: Micro-Action-Planning: Action Points Identified and Implementation Success

KEY:
- • :Point identified but not successfully implemented after 1y ear
- ● :Point identified and implemented within 1 year

Issues Identified in Action Plan:		FUGs by District:											#FUGs Identifying:	#FUGs successful in implementing	% Success
		Dhankuta			Sankhuwasabha			Bhojpur			Terhathum				
FUG Process	Action Point Issue:	1. Bhaludunga	2. Jalkini	3. Patle	5. Ramche	6. Dharma Devi	7. Sibhuwa	9. Ahale	10. Paluwa	11. Nakla	13. Bokre	14. Helebung			
Users Organisation & Cohesion	Membership & User Identification	●			●								2	2	100%
Forest Management / Conflict	Forest Boundary Clarification									•		•	2	0	0%
Forest management	Forest Protection Activities		●						●	●	●		4	2	50%
	Forest Management Activities*								●		•		2	1	50%
	Nursery / Seedling development			●				•					2	1	50%
Product Distribution	Product Distribution		●		●								2	2	100%
Decision-making & Implementation	OP&C Revision	•		●	•	•							4	1	25%
	Clarify / improve decision-making	●	●								●		3	3	100%
	Hold assembly	●											1	1	100%
	Hold FUGC meeting										●		1	1	100%
	Start tole-meetings	●	●	●	●	•	●			●	●	●	9	8	89%
	Work division in FUGC						●						1	1	100%
Communication & Awareness	Information flow		●	●	●		●						4	4	100%
	Improve awareness re OP&C	●											1	1	100%
Gender & Equity Consideration	Form women's group				●								1	1	100%
	Women's IG activity						●						1	1	100%
Economic Development	Fund generation									●	•		2	1	50%
	Membership fee								•	●			2	1	50%
	Plant bamboo / cardamom in CF			●		●	•			●			4	3	75%
Livelihood & Community Development	Construct FUG office / community hall						●						1	1	100%
	Support schools and clubs			●									1	1	100%
	Non-formal education			●		•	•	●					4	2	50%
	Vegetable production				•	●	•	●					4	2	50%
	Water supply			●		•	●						3	2	67%
	Skill-based Livelihood activities◊						•	●					2	1	50%
	Loan for goat / pig keeping							●					1	1	100%
	Saving and credit scheme			●			●						2	2	100%
Total action points identified		6	5	9	7	6	11	5	3	6	6	2	**66**		
Total action points implemented		5	5	9	5	2	7	4	2	4	3	1		**47**	
% of action points implemented by FUG within 1 year		83 %	100%	100%	71 %	33 %	64 %	80 %	66 %	67 %	50 %	50 %			**71%**

**Forest management activities means godmel (thinning, pruning, and planting)*

◊Livelihood activities include dhaka-weaving / furniture industry etc

boundary definition, user identification and organising their decision-making procedures. FUGs which are more institutionalised are looking further, toward economic and community development issues. Ahale FUG, in some ways the most successful FUG studied, shows users are mainly concerned with livelihood and community development activities.

Table 1 illustrates the level of success FUGs had over the year in implementing the action points they had identified.

The issues identified in FUG action planning can be categorised according to FUG processes, as can be seen from Table 1. These are discussed below.

5.1 The Process of User Organisation & Cohesion

Membership / User Identification
Two FUGs sought to identify the actual users, and distinguish role of secondary users. Both FUGs succeeded.

- In Ramche FUG membership cards were issues, and non-local members (from the nearby district headquarters) had their voting and product distribution status reduced.
- In Bhaludunga FUG, where the initial formation process had been incomplete, the actual forest users were finally identified.

Factors Contributing to Implementation were:

- Motivation in group to identify actual users

Factors Limiting Implementation were:

- In Ramche FUG primary users had difficulties to reduce the influence of secondary users (bazaar dwellers) on timber extraction policy of FUG

5.2 The Processes of Forest Management and Conflict Management

Forest Boundary and Boundary Conflicts
Seven out of 11FUGs studied had boundary conflicts, but only 2 made an action plan to resolve the land disputes between FUGs and landowner. Neither Nakla FUG nor Helebung FUGs were successful.

FUGs tend to view boundary dispute as beyond their capacity to deal with, and a matter for DFO and courts. Once matters reach court they don't feel it is their business. (For instance in Patle FUG the matter is in court. In Ahale and Paluwa Pikhuwa decision has been reached within the FUG that users can use forest area around their private land up to a certain distance (mentioned in OP&C in Paluwa). Hence encroachment issue is hidden to some extent. In Bokre Danda there is boundary conflict but this is not so serious

The Patle FUG case is a clear example of problems hanging over from a poor hand-over process. The DFO handed over a boundary conflict without clarifying it legally, so now the FUG cannot use part of forest, which is disputed. The patch is degrading and being converted to agricultural land day-by-day by individuals.

Factors Contributing to Implementation were:

- In some FUGs boundary conflicts has been negotiated by discussions within FUG, e.g. Ahale, Paluwa Pikhuwa.

Factors Limiting Implementation were:

- Problems arose from DFO handing over forest based on a Cadastral map, which is 23 years old.
- Lack of support from DFO and surveyor at FUGs prioritising this issue.
- External technical solutions sought, rather than social interaction / negotiation within village

Policy Implication: Boundary conflict is a serious problem for FUGs but one which they are generally unable to resolve, and only in some cases 'manage'. It is an intensely urgent issue which is threatening some Community Forests, and requires concerted action from the DoF.

- Need for DFO staff to introduce and facilitate Micro-Action-Planning
- Need for DFO staff (and other line agencies) to receive action plans, negotiate and provide support to FUGs on timely need-focused basis.

Forest Protection Activities

Four FUGs sought to improve their forest protection, from illegal cutting and unmanaged grazing. The remaining FUGs have reasonably effective user's turn or employed watcher system.

In the early years after the formation of FUGs the need for protection and enforcement is greatest, while other surrounding forest users may not yet be in FUGs and haven't grasped the concept. As FUGs mature protection becomes less of a critical issue, and most FUGs studied now have satisfactory protection system. Two FUGs were successful in implementing this point, Jalkini and Paluwa.

Factors Contributing to Implementation were:

- Several methods of protecting forest tried in all FUGs to reach most appropriate
- In many FUGs the 'User turn' protection method used (by household rotation)
- Protection roles were divided within toles
- Some FUGs with income can afford to pay for a watcher
- Awareness was raised in FUGs

Bokre and Nakla were not successful. Bokre Danda FUG planned to introduce a user's turn system of forest protection, but since many users are getting little benefit from forest, the motivation to participate has been low. There was previously fear of neighbouring villages using their forest, but this concern has now gone as the neighbouring users have formed into own FUG. In Nakla Daskhate FUG there was lack of success in implementing a user's turn protection system to stop the grazing in plantation area. This was because former Jimmawals in village have opposed the FUG and have discouraged participation. Users are not fully aware of their legal rights, and so follow the statements of the former Jimmawal. In this case more external support is needed to endorse FUGs authority and spread legal awareness to users.

Factors limiting implementation were:

- Lack of distribution of forest products or other immediate benefit demotivates users from involvement
- Decision domination by disaffected elites can discourage protection
- Lack of co-ordination between neighbouring FUGs to stop illicit use of forest.

Active Forest Management

Two FUGs planned to improve their forest management activities, in order to achieve their aim of improving the forest condition and to produce forest products in required quantity. Paluwa and Bokre FUG planned to introduce *godmel* (pruning, thinning, and cleaning) and plantation. Paluwa FUG successfully implemented.

Factors Contributing to Implementation were:

- *Godmel* activities can supply forest products as a by-product
- Needs of users – to ensure increased supply of products
- Advice from DFO staff at field level.
- Forest management and nursery training.
- Knowledge of users groups.

Bokre was not able to implement improved forest management successfully. Factors Limiting Implementation were:

- Concern that when forest opened there will be unregulated product extraction;
- Inability of FUG to manage activities, and to control activities of individuals
- Insufficient field level support from DFO staff.
- Lack of awareness of forest operations mentioned in operational plan.
- Lack of dissemination /application of individual user's learnings from training

Nursery / Seedling Development

Two FUGs, Ahale and Patle sought to improve their nursery / seedling elements of their forest management in order to produce seedling for plantation in CF and private land of users. Patle was successful.

Factors Contributing to Implementation were:

- DFO provided training, tools and fund.
- Land available for plantation.
- Needs realised by FUGs from private planting and planting in CF.
- Local know-how and skill by users in raising seedlings and plantation.

Ahale was not able to improve its nursery or plantation further. Factors Limiting Implementation were:

- Poor decisions over plantation: Inappropriate location (underneath tree canopy) and poor choice of species
- Nursery started without analysis of users' requirements.

5.3 The Process of Product Distribution

Two FUGs decided to improve the system: Jalkini FUG and Ramche FUG to fulfil the needs of users for forest products

In Jalkini FUG tole-based product extraction regulation was introduced to ensure monitoring is more effective. In Ramche FUG a variety of developments were introduced, including identity cards for members, specific allowances for fuelwood sellers, a depot system for Sal ploughshare harvesting, and reduced Sal timber extraction. Factors Contributing to Implementation were:

- In Jalkini responsibility for product distribution decisions allocated to tole representatives.
- In Ramche of primary users determined to reduce benefits to secondary users from bazaar.

Two FUGs studied have not yet moved into forest product distribution. In Bokre Danda there is no opening of forest, as the FUGC doesn't yet have confidence to manage the forest product extraction properly. In Bhaludunga FUG there is no product distribution – and it is not in their action plan to start. Factors Limiting Implementation

- FUGs lack confidence in harvesting forest products.
- Difficult distribution system. High demand from users.
- In large groups it has been difficult for FUG to rationalise distribution system.

- Product mix need of different users is not being considered in management objectives.

5.4 The Process of Decision-Making and Implementation

Operational Plan & Constitution Revision

Four FUGs wished to revise their OP&C to bring them up-to–date both in terms of current format and current decisions.

Only one, Patle FUG was successful. Factors Contributing to Implementation were

- OP&Cs were revised through action-planning process, which concentrated attention of users and DFO staff.

The failure of 3 FUG to implement was due to a lack of understanding of revision procedures in the FUG and a lack of support from DFO staff to support revision. Factors limiting implementation are

- Lack of realisation in FUG regarding the need for OP&C revision
- Lack of understanding in FUGs regarding procedure for revision
- Lack of timely support from DFO to ensure OP&C revision occurs quickly and effectively.

Policy Implication: FUGs must be informed of the proper procedure for OP&C revision and be supported by the DFO staff to complete this when necessary. The DFO must play its role by returning revised OP&C within a matter of weeks, not years as sometimes happens at present!

Clarify and Improve Decision-Making

Three groups planned to improve: decision making: specifically: to take decisions related to forest management and forest products distribution, and also to strengthen implementation of activities decided by assembly. These points were highlighted due to concerns over domination of committee / chairperson.

All three FUGs successfully implemented this point. Factors contributing to implementation were:

- Reform in FUG committee – selection of tole representatives.
- Clarify roles of committee members.
- RP staff provides regular monitoring and support to committee.

Factors Limiting Implementation

- Lack of visit and communication between RP staff and FUGs.
- Composition of Committee unrepresentative of toles and gender.
- Role of committee members unclear.
- Workload of FUG mainly on secretary and chairman of FUGC.

Hold Assembly

Bhaludunga FUG aimed to start holding regular assemblies, in order to plan, monitor and evaluate CF activities, to amend its C&OP and to disseminate information to users. It had not been able to hold assemblies regularly due to low awareness and lack of FUG dynamism. These problems stem from poor formation.

Bhaludunga was able to start regular assemblies. Factors Contributing to Implementation were:

- Realisation of needs and importance of users assembly.
- Decisions benefit users of different occupation.
- Annual micro-action-plan prepared and committee works to implement.

Factors Limiting Implementation
- Lack of awareness in Users groups.
- Inactive committee.
- Committee members lack facilitation skill and attitude.
- Role of RP staff in assembly is unclear.

Hold FUGC Meeting
Bokre Danda FUG planned to resume regular FUGs meetings. Bokre FUG had not been able to hold FUGC meeting due to changes in FUGC and poor handover procedure.

Bokre FCUG was able to start regular meetings. Factors Contributing to Implementation were:
- DFO and project support
- FUGC awareness raised
- Assembly mandate

Factors Limiting Implementation were:
- Hand-over process from old FUGC weak: lack of sharing of awareness of roles.
- Selection of inappropriate FUGC members

Start Tole-Meetings
Nine of the 11 FUGs studied sought to initiate regular tole-level meetings. The aims were users' need identification, sharing, awareness creation, and also promotion of tole-level development planning.

Seven of the 9 were successful in initiating tole meetings. Factors Contributing to Implementation were:
- Users recognised need and benefits.
- FUGC supported, including stationery provision
- Other projects supported (LGP)
- Some toles meeting informally

Factors Limiting Implementation were:
- Too many different development agencies working in toles – not co-ordinated.
- Lack of awareness, support, perceived value.

Work Division in FUGC
One FUG – Sibhuwa aimed to improve work division, in order to share responsibility and leadership across toles, and to encourage teamwork

This was successfully achieved. Factors Contributing to Implementation were:
- Micro-action-planning activities

Factors Limiting Implementation were:
- Lack of awareness of shared responsibility: social norm toward hierarchical organisation.
- Monopolistic elites /chairman seeking to hold control.
- Emphasis from outsiders is on Committee, not on tole
- Lack of facilitation skills amongst leaders

5.5 The Process of Communication and Awareness
Information flow
Four FUGs aimed to improve communication and information dissemination in FUGs. All were successful. Factors Contributing to Implementation were

- Tole representative (in FUGC) system, awareness of representatives
- FUG employees (watchers)

Factors Limiting Implementation were:
- Lack of recognition of knowledge and information held by some toles / occupation groups / women

Improve Awareness Regarding OP&C
In Bhaludunga the FUG sought to improve awareness of the OP&C in order that a basic level of understanding of CF could be reached amongst users. This was successfully achieved through holding a general meeting where the OP&C was discussed.

5.6 The Process of Gender and Equity Consideration

Form Women's Group
Ramche FUG planned to form a women's group to separately address women's needs and increase awareness of the issues. This was successfully implemented, despite some difficulties. Factors Contributing to Implementation were:
- Animator support
- NGO and LGP activities in village.

Factors Limiting Implementation were:
- Low awareness of needs among women and men
- Lack of support from most agencies including DoF.

Women's Income Generation Activity
Sibhuwa Salghari FUG made this an action point in order to increase income of women groups within FUGs. The FCUG was successful. Factors Contributing to Implementation were:
- WDO supported women groups.
- Village women form their own groups

5.7 The Process of Economic Development

Fund Generation
Two FUGs Nakla Daskhate and Bokre Danda FUG made this an action point, planning to Raise fund for community development

Nakla FUG was successful. Factors Contributing to Implementation
- Levy from individual members
- Sale of forest product within FUG
- Sale of NTFP to outsiders; e.g. Resin tapping company work with FUGs.

Bokre FUG was not successful. Factors Limiting Implementation were:
- Commercial sale of timber obstructed by DFO – complicated rules.
- Lack of awareness of potential marketable products
- Lack of market / market access

Lack of marketing support

Membership fee
Nakla and Paluwa Pikhuwa FUGs both sought to introduce a membership fee, to raise fund and clarify membership

Nakla FUG was successful, but Paluwa Pikhuwa FUG was not, due to resistance from users to having to pay a levy–in this poor area, where additionally many users lack confidence in the FUG leadership.

Plant Bamboo / Cardamom In CF
Four FUGs sought to utilise forestlands for planting NTFPs in order to generate funds. Three were successful, and factors contributing to implementation were:
- Grant from project / DFO
- Mobilisation of own fund
- Availability of suitable and fertile land.
- Motivation of FUG to raise fund

Factors Limiting Implementation were:
- Lack of initiation by FUGs to use NTFPs and other forest potentials.
- Timber-oriented Operational Plan.

5.8 The Process of Livelihood and Community Development
Construct FUG Office / Community Hall
Sibhuwa FUG planned, and successfully built a FUG hall / community centre. This is seen as a priority because, particularly in larger FUGs, there is a need for an institutional base.

Factors Contributing to Implementation were:
- Resources (fund, timber, land) were available
- FUG own building can play multiple roles e.g. Community hall, school room

Factors which may limit implementation:
- Lack of resources
- Awareness of need

Support Schools and Clubs
Patle FUG planned to improve the community school / club facilities, and did so successfully.
Factors Contributing to Implementation were:
- FUG Fund available
- Availability of timber
- Interest of users

Factors Limiting Implementation:
- There is much demand on FUGs from schools for money and materials, and some FUGs lack the resources to meet these.

Non-Formal Education
Four FUGs included this on their action plans to increase literacy, especially of women. Non-formal education (i.e. adult literacy classes) was a widespread request, especially from women. Of the 4 FUGs who included this on their action plans 2 implemented. Factors contributing to Implementation were:
- The Role of VDC and FUG network which was crucial to link FUG with DEO support (in Ahale)
- NGO support (in Patle)

Two FUGs didn't successfully implement. Implementation depends upon outside support for supply of teacher and materials, which was found lacking by the SSB district FUGs. Other factors limiting implementation were

- LGP project came with different development agenda, so literacy programme de-prioritised
- FUG approached to DOE and other agencies but not supported ('not in DEO target this year')

Vegetable Production
Four FUGs planned vegetable growing, to increase income of users, and to help users to use and develop their skills. Two FUGs were successful, thanks to the supportive role of the Women's Development Office. Two FUGs were not successful, due to a lack of initiative on their part.

Water Supply
3 FUGs identified improving the supply or maintenance of drinking water systems as plan targets. This reflects the fact that water supply is a critical issue to rural communities, particularly local availability of clean drinking water. Two achieved this successfully. Factors Contributing to Implementation were
- Scarcity of water: high level of will led to quick action
- FUGC took initiative.
- Fund availability

Factors Limiting Implementation were:
- Lack of support to fund repair of tank from WDO and municipality.
- Lower priority of supporting agencies.

Skill-Based Livelihood Activity Promotion
Two FUGs aimed to organise skill-oriented training for users. (Dhaka -making, tailoring, furniture making), and to help users to use skill for source of income. Ahale FUG achieved this successfully. Factors Contributing to Implementation were
- FUG took initiation.
- Office of District Cottage Industry provided training.
- FUGs provided fund on loan to individuals to begin activities.
- FUGs used their fund for household as well as forest-based activities.
- FUGs provided loan to poorer households.
- DFO provided seed money.
- DFO took initiation to liase FUGs with agencies concerned (in Bhojpur district)

Sibhuwa FUG did not successfully implement activity promotion. Factors which may be limiting implementation
- Lack of market in remote areas.
- Lack of co-ordination between FUGs and agencies concerned.
- FUGs hesitate to provide loan to their users due to perceived low pay back.
- Lack of training to FUGs in skill-oriented activities.

Loan For Goat / Pig Keeping
Ahale planned and successfully implemented loan facilities in order to help households generate income. Factors Contributing to Implementation were
- Assembly allocated specific amount for this purpose
- Willingness of users household to borrow and implement scheme properly

Saving and Credit Scheme
Two FUGs planned and implemented improved access to saving / credit. This was in order to reduce dependency on moneylenders, and to provide lower interest rate. Factors Contributing to Implementation were:

- Good cohesion within group
- Support from outside agency (e.g. UNDP. LGP)

Factors Limiting Implementation were:
- Users initiated in some toles but stopped due to lack of support from other users and FUGC
- Lack of awareness how to manage

6 Conclusions: Supporting FUG Development Through Local Micro-Action-Planning

From the discussion of the actual use of the Micro-Action Planning process we have seen a number of benefits:

Strengthened FUG
The Micro-Action-Planning process reverses the dependency relationship which FUGs have on the Department of Forests. The empowerment approach puts FUGs in the position to have the capacity to find their own solutions. Extension methods can be either enabling or disempowering. DFO staff can often behave according to the hierarchical culture in a 'parent-child'-type relationship, and give solutions 'from above'– which encourages FUGs to be dependent on them. For example in an FUG we worked at, Bokre Danda FUG, after formation there was much support from the DFO staff over 3 years – but when this support was finally reduced the FUG had not learned to be independent and it suffered from a lack of dynamism.

FUGs performing their own Micro-Action-Planning (for 1-2 year ahead) develop the sense of ownership and commitment for action.

The *tole* as the basis for FUG planning, decision-making and implementation has a number of observed benefits.
- Micro-action-planning helps FUGs broaden their activities and prioritise needs, both immediate forest management issues and wider development needs of the forest users
- Improved Communication and awareness-raising can occur through the tole-representatives.
- More forest users can participate in and contribute to tole-level discussions than in the general assembly. It is a more supportive environment, especially for women to speak up, and many people who cannot spare the time for general meetings, can afford to meet informally in their local area in evenings.

Improved Linkages and Coordinated Support
- FUGs have many needs, and with plan they can demand from DFO and other agencies for specific support
- Micro-action plans conveyed to district support agencies provide a basis to focus support activities on local priorities through 'informed demand-led support'
- As FUGs move beyond a role solely in forest management they are developing links with local government VDCs as well as FUG Networks
- Poverty alleviation support can be focussed to reach poor groups with FUGs

6.1 Supporting Micro-Action-Planning: the Role of Support Agencies

Given the benefits shown from this sort of process, how can it be supported in FUGs?

The process of supporting FUGs on the basis of their micro-action-plans needs to evolve organically from the FUGs themselves. Action-planning has been means to concentrate users' attention on issues, and focus attention of DFO staff on priorities for action.

Micro-Action-Planning will not work properly if it is structured or imposed by DFO staff. Instead it must be started by FUG, on blank paper, with facilitation offered by outside agencies. FUGs need facilitation skills for participatory Micro-Action-Planning. FUGs need to start the MAP process with the support of stakeholders. Support Agencies, such as DFO staff could support the whole process of tole-meetings / cluster meetings, women meeting, occupational group meeting, Committee meeting in the first year, and train FUG members to run the process themselves as a regular, perhaps annual cycle.

FUGs Micro Action Planning helps forest users to define own objectives and so manage support from other stakeholders, including DFO and project, in a planned way. In this way support can become demand driven, so that FUGs seek support appropriate to their current needs. This would improve upon the present situati9on where line agencies come with support provision or budget allocation according to their perceptions of FUGs needs.

Ownership of plan must be with FUG themselves; this encourages users to take responsibility for their self-development. This minimises likelihood outside agencies / NGOs can impose an inappropriate agenda. This can empower FUG to be involved in their self-development through their own initiatives.

1. Facilitation of MAP process, and technical advice, so that toles can identify their own needs.
2. Invitation by Nodal district office (e.g. District Forest Office) for FUGs to supply them with Micro-Action-Plans. In order that support to FUGs can be targeted to help achieve FUGs own priorities.
3. Planning process by District Agencies to co-ordinate support.
4. Regular contact visits to FUGs by field staff, with prior notice in order that meeting can be called.

- Line agencies and bilateral projects tend to look for programmes to scale-up: across large areas. This process produces site-specific and need based plans. The plans encourage users to identify their own resources for achieving targets, and focusing on what specific role outsiders can play.
-
- The DoF and other FUG support agencies have tended to assume FUG support needs are mainly related to FUG Constitutional and forest management issues. In fact FUGs have a diversity of support needs. Each FUG has specific support needs at specific times.
- One of the most common and urgent needs however is for outside support for Conflict resolution, especially over boundary disputes amongst the most urgent of which is conflict resolution.
- C&OP revision is important and FUGs are discouraged by the slow processing by the DFO
- There are also many community development needs FUGs are looking for support for.

DFO role:

In this process the DFO staff need only have a quite limited role:

- Initially simply to share the concept and help facilitate.
- Later Range Post staff will need to receive Action Plans requesting support, and convey them to the DFO or appropriate agency.
- The DFO can then plan support.

Why should we have any confidence that this improved process will be followed properly? There are problems with other procedures not being properly implemented in FUGs, and these often stem from the process being eroded at the 'transfer' stage by DFO staff due to workload problems. (e.g. the formation process and OP&C amendments process). However in this case the procedure is quite simple, and could even be easily played by other agencies.

After micro-action-planning process established with FUGs DFOs role becomes to co-ordinate support to fulfil needs of FUGs. In this way DFO time can be saved. Currently DFO staff are involved for 3 months in planning processes.

Even if this process were poorly followed in the FUGs, it would still be an improvement on no process at all, and so would help FUG development to move away from elites and committees setting the FUG agenda.

At present field support level is very low, due to both lack of planning and poor incentive structures within Range Posts and District Forest Offices. Improving Forest Guard, Ranger and DFO performance, and changing their working practice towards being demand-led by FUG needs, and facilitative to FUGs will be the key to successful support, which must primarily come from Forest Guards.

Bilateral Projects NGOs and Other Line Agencies:
As the CF process has moved from formation to post-formation there is a sense of lack of strategy and co-ordination in support agencies. With micro-action-plans, these agencies can respond to FUGs actual support needs.

Bilateral projects can work to develop DFO capacity in those areas FUGs need most support in. They may also engage in awareness raising over emerging opportunities (e.g. forest product marketing).

Currently NGOs seek funding according to their proposals of what is need at local level. With micro-action-planning they can respond to actual identified needs of FUGs
These agencies could also target support for disadvantaged groups within the community

VDC / DDC / Local Government
Currently VDC and local-government generally functions on estimations of what toles development priorities are. This planning process could help it become more demand-led and 'bottom-up'.

FUG Networks
These are growing in many areas and provide self-support for FUGs, and prompt other agencies to be more responsive to FUGs actual needs.

Co-ordinated Local Planning for Development Support

There is a major problem currently with lack of local development planning. The number of agencies working in districts has mushroomed in the last decade. Many agencies feel the problem of duplication of activities - for instance agencies can feel it is a problem that there is 'too much' other activity cramping them - rather than flourishing in the heightened possibilities for 'synergy' and co-ordination.

Problems arise where each agency forms *ad-hoc* development groups in an area according to its own agenda, 'conscripting' the local people in with promises and grants. Local people already have their own agendas and informal groups. When one agency's attention span

wanes, often another enters and the process would start again - imposed agenda, different shaped group, and more confused 'beneficiaries'.

Local people need to define and 'own' their own development agenda, from within their local group. Then they can choose between the offers of different agencies, and pull in the services they want. FUGs are the only permanent institution which reach the tole-level, and FUGs can play this role, through a 'micro-action-planning' process.

Project and Range-post staff need to carefully allocate their time to ensure:

- All FUGs receive a minimum of field support contact. If dates for field visits are agreed before the visit the FUG can organise FUGC or Assembly meeting for awareness-raising, discussion and meeting facilitation.
- Priority support needs receive priority attention: e.g. boundary conflict, and poverty focus.

In order to use time efficiently targeted support can be achieved if Project and Range-Post staff know the specific current support needs of each FUG, which can be found through ‘micro-action-planning’ process at FUG level.

Since formation FUGs have diverse and heterogeneous support needs. So far support agencies have made little effort to respond to these in a needs-based way specific to each FUG.

Recommendation: There is a need for support agencies to co-ordinate their activities on the basis of each FUGs specific needs. Line agencies can co-ordinate amongst each other under DDC direction. They will need clear information from the FUGs as to their specific support needs.

District Level Planning

Currently District level co-ordination of FUG support is very informal; as DFO is the only main partner; there is no countervailing pressure for performance. DFO can remain the main partner, but there is a need to involve other stakeholders to improve the development performance of FUGs.

In future district level co-ordination of support will be critical to cope with the increased demands of FUGs for specific support. District level co-ordination will need to go beyond informal meetings to work to a clearly specified function.

The diverse support needs of FUGs can be explicitly stated through micro-action-plans, and demands will be placed by the FUGs on the different district-level agencies to supply support. At district level a District Co-ordination Committee will need to divide responsibilities for support. This committee will review and plan support provision. It will monitor support achievement and challenge each agency including bilateral projects to perform well.

The DFO and bilateral support agencies have a key role to play in co-ordinating support for FUGs, and innovative processes of support planing to harmonise the different district agencies activities is needed.

The DFOs would strongly benefit from a computerised Geographical Information System / Management Information System to keep track of FUGs status, support needs, and support visits.

VDC Level Planning

Co-ordination of support is needed at VDC level. VDC-level FUG networks are widely identified as a critical potential for FUGs self-support and self-development

Currently bipartisan politics threatens the development of FUG networks: as FUG networks are led by leaders with political affiliation – only if political colour of network leaders is the same as that of VDC leaders and DFO do networks achieve their potential. When there are personnel changes, which often involve a change in political affiliations, working relationships are very negatively affected.

In future bilateral projects can promote VDCs to organise / support 'official' FUG networks – then regardless of political affiliation there is an institutionalised relationship. Already VDC – FUG networks are emerging in many areas with great benefits – but need formal promotion to become institutionalised.

FUGs can fit into the existing local government structure by feeding up their 'micro-action-plan' development needs, and demanding appropriate support to achieve them. VDCs can more effectively allocate their budgets if they can see the self-identified needs of the different toles, as well as the fund-levels of the FUGs to fulfil them. Already in one VDC a wealthy FUG has been funding its own electrification project, and the VDC has reduced its allocation of funds to this FUG in order to focus other more needy areas. FUGs can co-ordinate funding in this way to ensure funds are optimally used.

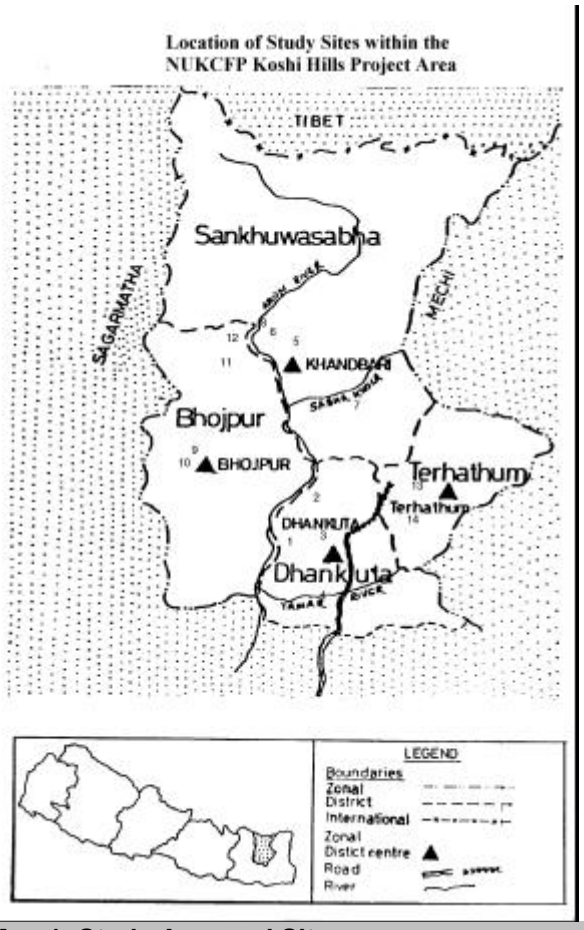
5. Entrepreneurial Development of Forest User Groups in Nepal: Fund Generation, Management and Use

Springate-Baginski, Oliver, Om Prakash Dev, Nagendra Yadav, John Soussan

Acronyms

BJP	Bhojpur District
NUKCFP	Nepal UK Community Forestry Project
CF	Community Forestry
DFO	District Forest Office
DHK	Dhankuta District
DOF	Department of Forests (His Majesty's Government of Nepal)
FECOFUN	Federation of Community Forestry Users of Nepal
FUG	Forest User Group
FUGC	Forest User Group Committee
HMGN	His Majesty's Government of Nepal
IGA	Income Generation Activities
PMUML	Communist Party, United Marxist Leninist
RP	Range Post (local Department of Forest office)
SSB	Sankhuwasabha District
TTM	Terhathum District
VDC	Village Development Committee

About the Project:
'Community Forestry in Nepal: Sustainability and Impacts on Common and Private Property Resource Management' **University of Leeds / NUKCFP Collaborative Research Programme**
This paper presents findings from a 3 year research project, funded by DFID through its Natural Resources Systems Programme, and was undertaken by University of Leeds Environment Centre in Collaboration with Nepal UK Community Forestry Project, and NRI.
It investigated the fundamental processes involved in Community Forestry: FUG institutional development at the local level, their impacts on the forest resource, and on farming systems and livelihoods.
The research project ran over 3 years between 1997-2000. The project used a Participatory Action Research methodology, across 11 Forest User Groups (or FUGs), and 3 non FUGs, in 4 hill districts of the Koshi Hills Zone in Eastern Nepal. This involved group level discussions, participatory resource assessments, household interviews, and discussions with a variety of stakeholders at different levels.



Map 1: Study Area and Sites

The study sites were chosen to reflect the great diversity of physical and social and institutional conditions. Throughout this paper case study reference is made to these 11 FUGs, which are as follows:

14 sites were selected for study, involving 11 FUGs and 3 non-FUG sites for comparability, to reflect a variety of different characteristics: district, accessibility, forest area and type, forest condition, number of users, and age. These are shown in the following chart:

Table 1: Characteristics of Study Sites.

Site No.	Site Name	Dist-rict	Accessibility	Forest Area (Ha)	Forest Type				Forest Condition	Number of House-holds	Forest area / Household (Ha)	Year of FUG formation
					Pine	Katus-Chilaune	Sal	Other				
1	**Bhaludhunga**	DHK	Accessible	23.0	-	K-C	-	-	Fair	105	0.22	'96
2	**Jalkini Katlar**	DHK	Medium	213.5	pine		Sal	-	Poor	119	1.79	'93
3	**Patle Sanne**	DHK	Accessible	147.1	pine	K-C	-	Utis	Good	287	0.51	'94
4	**Chimsuwa (non FUG)**	DHK	Medium	-		-	Sal	Hade, Dangero	Poor	*64	-	'98-'99
5	**Ramche Sunkhani**	SSB	Accessible	129.1	-	-	Sal	-	Good	132	0.98	'92
6	**Dharma Devi**	SSB	Medium	10.0	-	K-C	-	-	Fair	53	0.19	'91
7	**Sibhuwa Salghari**	SSB	Remote	107.6	-	K-C	Sal	Utis	Good	117	0.92	'93
8	**Heluwa Besi (non FUG)**	SSB	Remote	-	-	K-C	Sal	-	Poor	*65	-	'98-'99
9	**Ahale**	BJP	Accessible	24.0	-	K-C	-	Utis	Good	69	0.35	'90
10	**Paluwa Pikhuwa**	BJP	Medium	104.9	pine	-	Sal		Good	121	0.87	'93
11	**Nakla Daskhate**	BJP	Remote	34.5	-	K-C	-		Poor	140	0.25	'95
12	**Nepale Danda (non FUG)**	BJP	Remote	-	-	-	Sal	-	Poor	*125	-	'98-'99
13	**Bokre Danda**	TTM	Accessible	31.0	-	K-C	-	Alnus	Good	188	0.16	'89
14	**Helebung**	TTM	Remote	31.5	-	K-C	-	Alnus	Fair	151	0.21	'93
	Mean:			77.9						135	0.58	

**Note: Estimated number of households for non-FUGs*

Accessibility was classed according to whether FUGs were less than 1 hour from District HQs (accessible), between 1-2 hours (medium), or more than 2 hours (remote) – a conventional approach in the Mid-hills.

Forest condition assessment was reached by both research team and forest users, according to density of stands, forest product availability and level of regeneration.

The method used was a 3 yr – action research approach incorporating biometric and participatory resource assessment

Summary

Many FUGs in the mid-hills of Nepal, through effective forest protection, are presiding over an increasingly lucrative resource. These forests are generally being managed however far below their productive and commercial potential. There a number of reasons for this. Initially FUGs were mainly oriented around forest protection, and the fulfilment of the basic needs of the forest users. These factors were reflected in the FUGs' Operational Plans, which in the haste to form FUGs were often drafted according to a conservation-oriented standard format, regardless of each FUG's specific potentials.

Despite constraints many FUGs are trying to move towards a more commercial orientation, and having fulfilled users basic needs, are looking to use the forest resource to generate funds. Regenerated forests can provide sustainable flows of various marketable products both timber and non-timber based. For instance pine resin, timber, medicinal and aromatic plants. Furthermore FUGs need not to base revenue generation on forests their alone: forest related activities such as seedling production are also proving lucrative.

Having generated funds, they need to be handled transparently. For most local communities it is a new experience to deal with such funds on a collective basis, and most FUGs have a

need for improved understanding of finances procedures such as annual auditing and the handover of funds to one committee to the next when the committee is changed.

Whilst there are many opportunities open to those FUGs which hold generated significant funds, many are as yet hesitant to actually mobilise them for community development.

At present only a small (though increasing) proportion of FUGs are actually taking advantage of the possibilities for revenue raising, to fund community and livelihood development activities.

There has been so far both an unsupportive policy environment for the entrepreneurial development of FUGs, and also concrete constraints on marketing of forest products, in terms of obstructive regulations, a lack of awareness of the opportunities, a lack of marketing infrastructure, and poor support services to FUGs.

This paper identifies the potentials open to many FUGs for economic development, and indicates policies which can promote this. It is structured into 6 main sections: an initial overview, a discussion of fund generation, a discussion of fund handling and transparency, a section on fund mobilisation, there is then a case study of an FUG which has been very successful in economic development. Lastly there is discussion of the policy implications.

1 Overview

FUGs have now spread throughout the middle-hills of Nepal, and most are managing their forest resources reasonably well. Increasingly FUGs are moving from a passive resource-oriented role to a dynamic broad developmental role.

Although the Department of Forests initially conceived of them as a purely forest-related body, the actual members are finding them useful as a collective forum on all manner of day-to-day issues, as they are the only governance body operating down to the *tole* level. As such, they represent a new grass-roots institution with great potential for local development planning, decision-making and implementation.

As FUGs become more developmentally-oriented a central issue for them becomes how to generate and mobilise resources for livelihood and community development. During the Leeds / NUKCFP collaborative research, FUG members identified key indicators of FUG development processes. (This is fully discussed under paper 2 of this series). Under the process of economic development three main indicators were identified: active fund generation, fund transparency, and fund mobilisation. These main issues are examined in detail in this paper.

Economic development in Community Forestry has had a lower priority than other issues in the past amongst support agencies. Initially Community Forestry was introduced to reverse resource degradation, and as such the emphasis was mainly on protection rather than utilisation. The basic needs of users were considered in working plans, and were to be fulfilled through the product distribution practices of FUGs. However product distribution has almost solely emphasised these basic needs, and has tended to be highly conservative. Now that many Community Forests have effectively regenerated, and are exceeding the users subsistence needs for forest products, the need for restrictive conservationist approach may be relaxed in favour of a community and livelihood development approach. Many FUGs are already moving in this direction, despite both the obstructions of the current policy climate, and the physical constraints.

1.1 Policy Outlook on Economic Development of FUGs and Poverty Reduction

Community Forests has always been seen at the highest levels as a key opportunity for poverty reduction, as well as resource improvement. In HMG's 9th Plan (…) sees the forest

sector as contributing to the national policy of poverty reduction through increased productivity of the forest resource, and through forest based commercial and income generating activities. In the 1988 Master Plan for Forestry, NTFPs were recognised to have great potential in future markets and guidelines for the development of MAPs were established. 5 per cent of the budget was allocated to the promotion, research and value adding of MAPs and minor NTFPs, (Chandrasekharan, 1998). According to the Master Plan:

> *"once the forest based industries expand they will provide employment to hill people, increase their income and improve their lifestyles and reduce migration".*

Communities that partake in NTFP production and marketing are under the purview of the DoF, who as well as protecting production, also have the right to ban collection and export and claim royalties. .

However, within the Master Plan, modifications in the royalty system have been discussed, which will hopefully provide the communities with the opportunities that would improve their livelihoods. Other changes considered were:

- The reduction of transport costs for NTFPs,
- Creation of an intervention agency to give advise and improve opportunities for communities involved in NTFP to receive credit (Chandrasekharan, 1998).

Edwards, (1995), estimates that in certain cases NTFP could contribute nearly 50 % of the average annual household income and could involve a revenue of approximately US$ 850 000 for HMGN, if royalties and monitoring are implemented effectively. But this is speculative.

Donor agencies such as DFID are primarily concerned to reduce poverty (E.g. DFID White Paper (1997)) In Nepal it is usually the poor, with few private resources, and women who collect NTFPs. NTFP collection may take the form of casual collection between carrying out other jobs, such as domestic chores or they may involve constant, seasonal collection for example when tapping resin. Once collected, a middleman is usually responsible for processing and marketing the product, or the product may be exported in its raw form.

1.2 Processes of FUG Entrepreneurial Development

Forest resource utilisation
Many FUGs have been keen to optimise the use of their forest resources, and one key opportunity is the **marketing of timber and non-timber forest products**. FUGs are obliged to seek DFO approval for their operational plans, and although the marketing of timber is legal, in practice DFOs have been unwilling to approve such measures.

Value Addition from Local Processing
Unprocessed MAPs constitute the largest percentage of NTFPs exported from Nepal and Edwards et al (1994) wrote that out of a hundred varieties of NTFPs exported to India, Chiraito comprises 50% of that amount. India is the primary buyer of processed and unprocessed MAPs as well as other NTFPs, such as resin; which will be discussed in more detail later. As India has much greater consumer demands for NTFPs and as they are more technologically advanced than Nepal, imports can be easily processed and sold by India, to international buyers, such as Europe and the US. Due to the distance between collectors and consumers, as well as lack of institutional support and low economic returns, it is unlikely that NTFPs will be a sustainable commodity, unless these factors are improved. However, it would be extremely difficult to change the existing trading system and would call for a complete overhaul, therefore local level market structure should be improved through building on structures already in place, as well as improving general management policies (Chandrasekharan, 1998).

Constraints of Product Marketing
So far there has been little support at district level and below to help FUGs market forest products effectively. Some bilateral projects have tried to promote the entrepreneurial development of FUGs, particularly the Australian NARMSAP and USAID. Their experiences have been mixed. The Australian project had in initially piloted sustainable timber processing by FUGs but this ran into monitoring issues with the DoF. The ASAID projects have had an ongoing an ongoing entrepreneurial development programme.

A particular obstruction to FUGs' entrepreneurial development is the physical constraints of lack of accessibility of the mid-hills. Although FUGs often have very valuable forest resources and skilled human resources in agro-forest based activities, the remoteness of villages from market places such as district headquarters, and major economic centres, and the lack of transport facilities in the hills, has been an obstacle to the realisation of economic opportunities. However at present road access is growing through the building of more roads, which will connect more FUGS to markets

Many potential areas for FUG entrepreneurial development already exist in the community: current NTFP-related activities, such as resin taping, Chiraito, Aloe, Argeli, Lokta (for craft paper production), as well as many other NTFPs being collected on a small scale. Initiatives could be taken by FUGs and DFOs to explore how to maximise benefits from these activities.

Fund transparency issues
Despite the relative lack of support there is nevertheless an increasing number of FUGs which have managed to generate funds. Once FUGs have mobilised funds a concern many forest users have is over the **transparency** of management procedures. As the FUG is a new institution few local committee members have the experience of managing significant sums, and problems can arise in a number of ways. Since awareness good practice is low, poor procedures and record keeping is a frequent phenomenon. One example, and is poor hand-over procedures after changes of committee members. This can introduce discontinuities and confusion. In a significant number of the FUGs studied money had gone missing, reflecting the need for more effective auditing procedures.

Fund mobilisation issues and opportunities
Having generated funds, the challenge to FUGs becomes their **effective mobilisation.** DoF staff tend to advise FUGs to prioritise forest development activities for fund mobilisation in accordance with their agencies' responsibilities. However FUGs themselves tend to prioritise community development activities, such as school-building, footpaths, drinking water, electricity and community hall. One FUG (Dharma Devi FUG) has even allocated funds to buy land to increase the area of the Community Forest.

Again, this can be a learning experience for users not used to handling such amounts for collective activities. Many FUG committees show a tendency to 'prudence' – i.e. preferring to avoiding the risks and responsibilities of mobilising the funds. (FUGC members are often hesitant to take on the risk, in case they may be blamed for any loss). On the other hand many FUGs have been very successful in funding a spectrum of community development initiatives. In the earlier stages much money was spent on improving forest related issues: developing nurseries etc. Other areas of community development also quickly received attention: road and path-building, school-building and improvement, electrification and so on.

Different FUGs have diffent resource endowments, and adjacent FUGs can have very diffent fund statuses. Whilst this may lead to unequal opportunities for users of different FUGs, in some cases VDCs are addressing this by reducing development funding to wards containing FUGs with larger funds, in order to concentrate support to those wards without such benefits. In this way FUGs economic development can directly complement VDC development activity.

Livelihood Development and Poverty Reduction
The economic development of FUGs can benefit poorer groups livelihoods in a variety of ways, although there are also concerns over equity issues.

It is usually the poorer households who are most dependent on NTFP collection for their livelihoods, and with the improvement in the forest resource there are usually more NTFPs available. Economic development of the FUG can provide employment opportunities for users, and also FUGs have begun to support livelihood development particularly through skill-trainings and through micro-credit.

The FUG fund is becoming a key 'financial capital', through micro-credit schemes, which households, particularly the poorer ones, may be able to draw on.

Study of FUG's Actual Experiences
The Leeds / NUKCFP study looked at 11 FUGs in the Koshi Hills, over a two year period. The sites were selected to cover a cross-section of physical, social and institutional characteristics.

Process Indicator	FUG:										
Key: ♦	**1. Bhaludhunga**	**2. Jalkini**	**3. Patle**	**5. Ramche**	**6. Dharma Devi**	**7. Sibhuwa**	**9. Ahale**	**10. Paluwa**	**11. Nakla**	**13. Bokre**	**14. Helebung**
Physical Characteristics											
Forest Resource Size (Ha.)	**23**	213	147	129	10	107	24	105	34	31.0	31
Forest Resource Type: Pine		pine	pine					pine			
Katus-Chilaune	K-C		K-C		K-C	K-C	K-C		K-C	K-C	K-C
Sal		Sal		Sal		Sal		Sal			
Other			Utis			Utis	Utis			Alnus	Alnus
Forest Resource Condition	Fair	Poor	Good	Good	Fair	Good	Good	Good	Poor	Good	Fair
Accessibility of settlement to road / Dist. HQ	Accessible	Medium	Accessible	Accessible	Medium	Remote	Accessible	Medium	Remote	Accessible	Remote
Social Characteristics											
Number of Forest User Households	105	119	287	132	53	117	69	121	140	188	151
Forest Area Per Household	0.22	1.79	0.51	0.98	0.19	0.92	0.35	0.87	0.25	0.16	0.21
Institutional Characteristics											
Year of FUG Formation	96	93	94	92	91	'93	'90	'93	'95	'89	93
Active fund generation	♦	♦	♦	♦	♦♦	♦	♦	♦	♦	♦	♦
Fund transparency	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Fund mobilisation	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦

The above chart indicates the characteristics of the FUGs studied, and gives assessment of their performance on indicators identified by the Forest Users.

Why do some FUGs do better than others? From the FUGs studied it appears there are some characteristics which make it easier for FUGs to perform well economically, but much depends on group cohesion and purpose, dynamic leadership and support and linkages outside the FUG.

It may be noted from the chart that 3 FUGs perform well in each of the 3 process indicators: Patle, Dharma Devi and Ahale. Dharma Devi and Ahale are very similar FUGs in many ways: they are small cohesive groups (53 and 69 households respectively), with a small forest to manage (10 and 24 ha), upon which they are highly dependent for fuelwood. Both the forests are very closely managed; In Ahale fundraising has been very successful mainly through a very well-run nursery, which has produced seedlings for sale to the Department of Forest, and increasingly to other FUGs. In Dharma Devi most money has been raised from within the FUG – through a user levy. Because this is for a specific purpose the users have been motivated to contribute: the forest only just fulfils users' fuelwood needs, and the users have agreed to raise funds to buy a piece of land to plant with trees for future fuelwood. This is being mobilised in the meantime as a micro-credit facility to great benefit for poor users.

Patle FUG is a quite different case. It is a very large forest (213 ha) with a large heterogeneous user group (119 households). It is easily accessible to district HQ and a main road. Most of the forest is mature pine – producing a large amount of pine-resin. At the time of forest hand-over resin collection was being performed by the local government NTFP

marketing agency. The new FUG took responsibility for managing resin collection, supervising the employment of the local collectors, and received the substantial revenue flows. The financial sums involved have led to a high level of interest from users in the FUG, and have led to much local development work.

A very significant development at Patle FUG has been the emergence, over recent years, of a local FUG Resin producers network, partly through the support of the Leeds – NUKCFP action research programme. This network has sought to improve the FUGs' bargaining position, and to explore marketing opportunities.

Four FUGs in the study show a mixed performance on economic development indicators: Jalkini, Ramche, Sibhuwa and Paluwa Pikhuwa FUGs. These FUGS are all quite large heterogeneous groups (105-213 households) managing large mainly Sal forests. To generalise these FUGs are all performing moderately well in the face of the challenge of high transaction costs to co-ordinate all the users. There are potentials for fund generation – and some such as Ramche are exploring.

Four of the 11 FUGs studied perform poorly or only moderately in all three of the indicators of economic development. This is due to their poor institutionalisation as FUGs. Coincidentally they are all predominantly Katus Chilaune forests, which are useful for fuelwood and fodder, but not for timber. However this has not been a constraint for Ahale or Dharma Devi.

Overall we may observe that there are many opportunities for FUGs to develop economically, and although helped by the nature of the forest resource they have, some FUGs, such as Dharma Devi and Ahale show that this is not a constraint. More important determinant are group cohesion, dynamic leadership, helped by supportive linkages to outside agencies.

Benefits from economic development are many, including improved management if the forest resource, employment opportunities for forest users, in forest management, product collection and processing and so on. Mobilisation of the funds raised can then create improvement in community infrastructure, and skill development for users,

Policy Implications: Support
Support agencies and projects can support the economic development of FUGs in a number of ways. Firstly by raising awareness amongst FUGs of the opportunities and possibilities. Secondly, where appropriate by supporting collective FUG TFP / NTFP marketing initiatives, through which a number of FUGs can work together to pool market information and bargaining power. Thirdly, by promoting best practice in accounting transparency.

Poor Marketing Links
Poor marketing is the largest constraint to NTFP collectors, in bettering their socio-economic status (Chandrasekharan, 1998). The price received for the product depends on the supply and demand, although it is also affected by many social and institutional factors. For example, in some cases the DoF controls the prices and, as mentioned previously, HMGN, collects royalties. This could give the DoF the incentive to support FUGs economic development

2 FUG Entrepreneurship: Fund Generation

Entrepreneurship may be defined as: *One who undertakes an enterprise; one who owns and manages a business; a person who takes the risk of profit or loss'* (OED 2001).

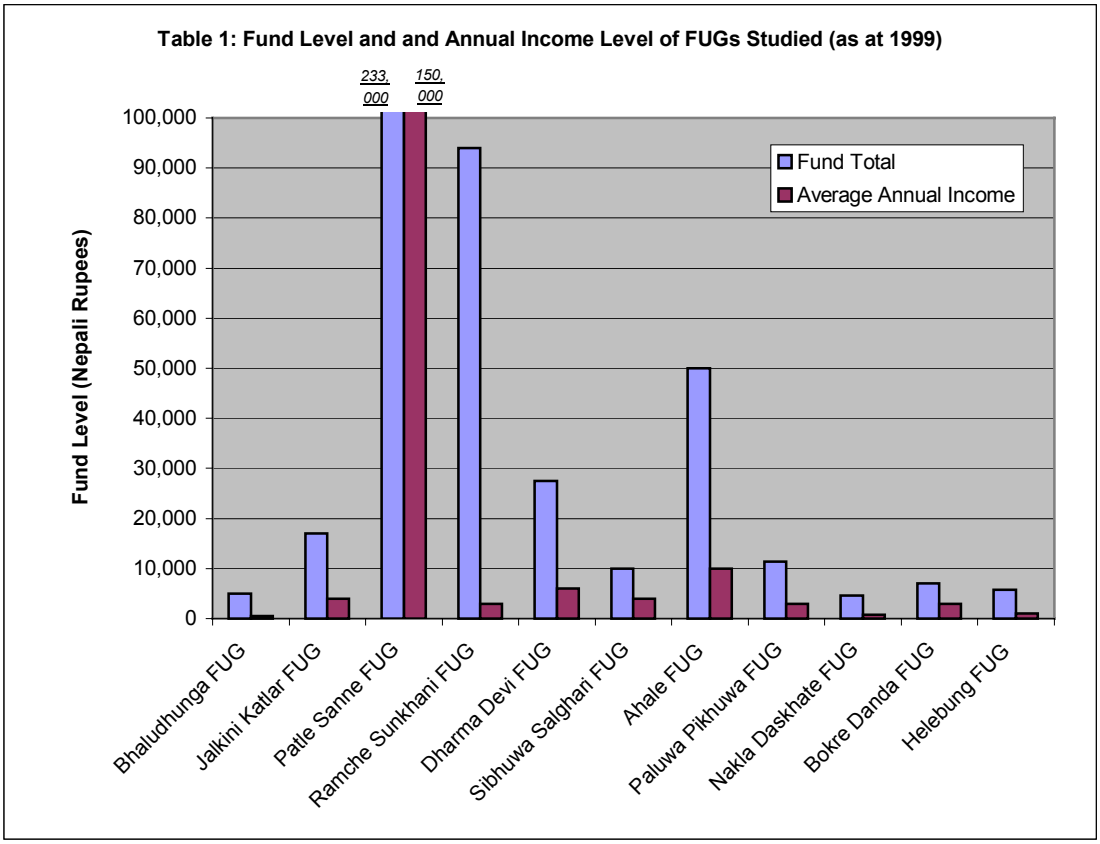
Many FUGs are moving beyond simply fulfilling subsistence needs for forest products, and are considering market-oriented exploitation of their forest resources, with the goal of generating income. The chief opportunities are collection and processing of timber and non-timber forest products, although there are others.

Virtually all of the 11 FUGs studied (10 of 11) had a bank account. This is mainly due to the DFOs in Koshi hills, who have been successfully supporting FUGs to open bank accounts, by supplying a letter to banks to state FUGs are legal institution entitled to open account.

All 11 FUGs studied had some funds. The mean level in spring 1999 was Rs. 42,300. Seven of the 11 FUGs studied have funds of Rs.10, 000 or above. The highest level was Rs.233,000, (which roughly exchanges as £2,300 or just over $3500).

The fund levels of the FUGs studied are shown in Table 1 below.

Table 1: Fund Level and and Annual Income Level of FUGs Studied (as at 1999)



Fund-raising in FUGs occurs through two main areas:

- Firstly from within the FUG: through normal FUG charges on users:
  - Through initial joining fees, regular membership fees and special levies.
  - Royalties for forest product collection
  - Through fines within the FUG

- Secondly, from beyond the FUG:
  - Initial grants to FUGs for plantation activities and to establish nurseries.
  - Marketing of forest products, and other products (e.g. seedlings)

The FUGs with smaller funds have generally only raised them from within the FUG. Those with larger funds (e.g. over 10,000) have mainly (with one exception) raised these through marketing forest products beyond the FUG.

These have been generated from the sale of forest products to the users of other products, such as resin to outsiders. FUGs close to the road or bazaar area and having pine or Sal forests have been able to raise large funds (i.e. over Rs.50, 000).

Fundraising within the FUG – 'Passive Fund Generation'

Fundraising beyond the FUG: *'Entrepreneurial Fund Generation'*
During participatory research activities first users gave a number of suggestions how forest resource could be more actively used for fund generation purposes. The main suggested indicators were

- *'Excess timber sold in local bazaar for fund income'*
- *[Locally available Non-Timber Forest Products] sold and FUG generated income'*
- *'Plantation of income-generating plants in forest (e.g. Cardamom)'*

This paper looks at a number of cases. Particular attention is paid to the Resin Producers Network, which has emerged from the R.6778 Action Research exercise in Patle Sanne FUG.

FUGs are often discouraged from marketing timber by DFOs, although legal provision exists, and the Director General has personally confirmed that it is legally acceptable. These issues are clarified.

Although all FUGs raise some funds through royalties and fines, users identified active fund-raising as a positive indicators of the FUGs development, giving example of activities such as plantation of income generating species, and selling of NTFPs and timber. Only 2 FUGs have active fund-raising of this sort as yet: Patle which has resin-tapping activities, and Ahale, which sells seedlings from its nursery to DFO.

Three other FUGs had also had a moderate level of active fundraising: In Ramche FUG funds have been generated by timber royalties within the FUG – as there are many bazaar-dwellers who buy timber through the FUG at concessionary rates. In Dharma Devi and Sibhuwa Salghari FUGs funds have been raised through levies on members. This has been accepted as fair in Dharma Devi, but in Paluwa Pikhuwa, where there are wide inequalities, and the fund is to be spent on upgrading the school, not a development priority for the poorer toles, the levy was very unpopular.

Most of the FUGs have potential to develop active fund-raising. Possibilities exist for:

- Resin and other NTFP collection and sale
- Plantation of Cardamom and other income-generating species
- Marketing of excess timber, once agreement reached with DFO

Patle FUG is generating money by resin collection. Other FUG have planted cardamom in their CF, which can be a good source of income. Each FUG has some potentials at least, but they suffer from a lack of awareness to identify them, and a lack of support and encouragement. For instance resin taping is a possibility in many FUGs, however currently lack of transport infrastructure discourages this. There are many NTFPs which could be intercropped. There are also many over-mature trees which could be cut for timber but at present restrictions from DFO stop this.

Active fund-generation raises the interest of the users in the FUG, in order to participate in decisions on how to spend the proceeds. Patle and Ahale are amongst the most successful FUGs in other respects also, such as awareness, community development.

Dharma Devi FUG identified the potential for more active fund-raising in its Micro-Action-Planning process, and implemented planting of income-generating species in the forest.

Policy Implications

- Timber marketing is permitted by FUGs under bylaws, and according to the Director General once local demand is fulfilled. In practice FUGs are finding it impossible to get

DFO approval. In practice this means fallen and over-mature trees, and excess timber is going unutilised. Stakeholders such as bilateral projects need to work with DFOs to clarify working procedures to supervise timber marketing from FUGs.

- Active fund-raising in FUGs by marketing of NTFPs could be supported by FUG networks / single-product networks, forming producers co-operatives to share market information and bargain for improved prices.

- May dis-empower individual collectors – so need for sensitive group approach to provide bargaining power for individuals – main bottleneck is market access on favourable terms – FUG enterprise network could provide

- There are a great variety of NTFP products, including herbs and Medicinal and Aromatic Plants (MAPs), mushrooms (chiraito / lokta / Katha / Amla / Baro- baro) which can be either collected from wild growth in the forest, and intercropped (e.g. Alaiche – cardamom)

- Local processing of forest products can provide rural employment opportunities

3 Fund Transparency

Forest users' suggested indicators:
- *'Users should have awareness about fund status, and understanding of objectives for fund'*
- *'There should be transparency regarding fund'*

In most FUGs users are obliged to trust the FUGC to look after the fund – with little basis for trust. Problems over fund transparency are a recurrent feature of many FUGs, 5 of the 11 in this study. In 4 of those, because the fund was so small few users had taken an interest in it, record-keeping and hand-over of funds to new FUGC had been poor, and as a consequence of the lack of clarity irregularities had occurred, with ex- treasurers or chairmen being implicated in embezzlement of a few thousand rupees. In the one FUG (Ramche) where the fund level was large (almost RS.100, 000) there not a problem with irregularities, but only that users were not kept informed of the absolute level.

There were 2 outright cases of fund embezzlement, 1 case of probable embezzlement, and 2 cases of irregularities. (Irregularities meaning money borrowed formally from fund has not been repaid)

In two FUGs visited loans had been made to users and then the records apparently disappeared.
Three clear examples where embezzlement had occurred:
- Sibhuwa Salghari (site 7) former FUGC members have not handed over the fund or details of its level. Neither are they responding to demands of the current FUGC to explain themselves.
- Nakla Daskhate (site 11) the former FUGC Chairperson took Rs.1,900 with him when he moved to India, and failed to handover the accounts.
- In Bokre Danda FUGC changed two years ago, and a new committee was formed, but handover procedure was very poor, in particular details of fund status were not made clear. Rs.6,000 was still held by former treasurer, which was only recently discovered. The problem was with lack of formal handover procedure.

There are very poor controls on handling of the fund in FUGs, exposing them to the danger of arbitrary corruption. From this study it is evident that irregularities are common when funds are insignificant, but as funds grow users take a more active and assertive interest in them.

There is legal provision of auditing FUG fund with or without outsiders, and report to DFO with in a month of the end of year. In practice very few FUGs are aware of this requirement and few are following it. Problems of irregularities/ embezzlement occur when there is no transparency, and / or when there are poor hand-over procedures, allowing unscrupulous treasurers to take money unnoticed. Without external audit (or internal but separate form FUGC) funds are liable to embezzlement or wilful neglect in record keeping.

Policy Implications

- Few FUGs have proper and effective audit procedures, which if implemented, and the findings presented regularly at the assembly meetings, would help to minimise irregularities.
- Attention needs to be given to increasing visibility of FUG funds, ensuring records of funds are accessible to all, ensuring audit procedures effective
- If rangers or forest guards are to make regular annual or bi-annual visits for post-formation support in a holistic manner they could at this time check audit of accounts to facilitate good fund-management practices.
- It is hoped in future FUGs will be sufficiently established to select their own auditors, as required by the Forest Act (1995) article 36.

4 Fund Mobilisation

Having generated funds, FUGs are employing them in a variety of ways for community development. A number of FUGs have mobilised their funds for community development: from micro-credit to electrification. Poorer households are commonly very interested in micro-credit facilities. Experience and potentials are discussed.

Forest users' suggested indicators:

- *'Programmes should be conducted with fund'*
- *'Money collected in the fund should be used, for instance lent to the poor without security deposit so that that can increase income'*

FUG awareness about fund issues is generally poor, and FUGs rarely define the objectives they have for raising funds. There is often a lack of agreement or clarity in most FUGs regarding the objectives towards which the fund could be put, and this militates against both fund raising and mobilisation, and consequently money tends to rest in bank accounts. There is a lack of skill in FUGs to mobilise these funds. Communities are not benefiting as they might from these funds.

Eight of the 11 FUGs studied had mobilised their funds for some of the following:

- Employing forest watcher, nursery staff, forest product harvesting labourers
- Buying plants for plantation work (e.g. cardamom)
- Community infrastructure development: funding water supply, electricity supply, bridge building, community hall construction, trail-making.
- Community support: e.g. financial and timber support to schools, health-post, community groups such as youth clubs
- Household loan facility

In Patle FUG, the richest FUG, much community development has been achieved through the active mobilisation of the fund, raised through resin tapping. In Dharma Devi FUG users have planned to save to buy a 10ha piece of land to develop a new forest plantation on to supply fuelwood needs.

A particular issue in relation to fund mobilisation is the use of fund for micro-credit, and this will be discussed further below.

In 3 FUGs there is no fund mobilisation. This was due to a lack of planning of vision of how the fund could be used. Without proper planning processes the fund issue has not been addressed. However in most FUGs there are not proper planning procedures to mobilise funds, and decisions often reflect the assumptions of the FUGC of what is the best was to use the fund, rather than reflecting the actual priorities of the users.

There is a correlation between poor mobilisation and poor transparency. In Nakla Daskhate, Bokre Danda and Helebung there has been little initiative to use the fund, and users have become disinterested in the issue. Under these conditions irregularities have occurred.

Policy Implications

- Funds are generally being mobilised effectively. It is important that decisions on how funds are to be spent reflect the interests of all groups, particularly the poorest, who have most to gain in terms of improved livelihoods.

5 Case Study: Resin Taping and the Resin Collectors Network

5.1 Introduction

Only a small number of FUGs have so far taken advantage of the opportunities for economic development, as in only a few cases have the circumstances been supportive supported. This section looks at a strong positive example of a successful FUG. Patle Sanne FUG was in a fortuitous situation to begin with: it was endowed with an extensive and lucrative forest already producing revenues from resin. From this good start the FUG showed initiative in mobilising the fund for a variety of community development projects. The high level of the fund motivated the users to take an interest in its use. Through strong leadership the fund was well-handled, resulting in a number of benefits to the local people. From this FUGs strong position it has initiated a local network of Resin tappers, in order to provide mutual support and bargaining power, as there are now a number of privet companies offering higher rates for resin than the government rate. However ensuring timely payment can be a problem.

This example highlights the need of FUGs for support to marketing and economic development initiatives, which is so far lacking. Many more FUGs have the potential for these sorts of developments but lack the awareness, guidance and support. One of the key opportunities is marketing networks, in order that FUGs can work together to pool their knowledge, strengths and bargaining power.

5.2 Resin Marketing in Nepal

FUGs manage a variety of different forest types. Chir pine forests (*pinus roxburgii*) are found around altitudes of 1, 400 metres, between the sub-tropical and temperate region. Oleo resin can be collected from mature Chir pine (i.e. at least 36 inches diameter) between mid-April to mid October.

The wood of pines consists mainly of or tracheids, which are responsible for transporting water and nutrients from the root to the leaves, as well as acting as an efficient support mechanism. Vertical resin canals are found in the elongated cells of pines (or tracheids) and the tracheil tissue, lined with unlignified cells are responsible for producing the resin (Mirov, 1967). Pine trees are very sensitive to wounding and once a wound has been made in the wood, resin ducts form above it (Richardson, 1998). . A series of diagonal grooves that meet in the middle are carved into the tree and a pot collects the resin at the bottom.

The resin is collected in tins by local collectors, and periodically transported to the nearest processing factory by road. The resin is then converted to rosin and turpentine via a steam distillation process. Rosin is the partially molten residue that is left at the bottom of the

container and is fed down a funnel that runs out of the building and cools in a trough in the air outside. From the raw resin 2/3 of rosin produced, perhaps 1/6th of turpentine and 1/6th is waste.

Both rosin and turpentine are important market commodities. Turpentine is used as a solvent, particularly for paint and in some medicines. Rosin is used in the pharmaceutical industry, as well as in soap, adhesives, insecticides, disinfectants, rubber and paint.

Herbs, Production and Processing Company Ltd (HPPCL) was established under the Ministry of Forests and Soil Conservation and is one of the few companies to have a processing plant in Nepal. They are responsible for processing a range of essential oils and medicinal remedies, for example, *Sancho*, which is a well-known medicinal remedy in India and Nepal. However, HPPCL also processes resin and is supplied by the eastern area of Nepal in the Dhankuta district, as they are the closest processing plant; all other companies have plants situated in the west of Nepal.

Other sources of oleoresin grown for the production of turpentine and rosin are Pinus elliottii, which grows southwards from South Carolina in the US, Pinus montezumae, which is found from Coahuila to Guatemala in South America and Pinus Pinaster, which is widely distributed (Mirov, 1967).

5.3 The Economics of Resin Processing

Resin is bought from the FUGs for around NRs 10/kg and once it has been processed, rosin is then sold for NRs 44/kg and turpentine is sold for NRs 26/litre.

In one year HPPCL produce about 500 tonnes of rosin and 75 tonnes of turpentine, which they export to India and which generates around NRs. 20 million a year. It is only in the last couple of years that they have ceased the processing of resin in Kathmandu, as the factory is diesel powered and the price of diesel became to high for them to carry on running the plant. Nowadays, they produce Sancho and a few other essential oils and resin is sent to the Barra district for processing, as they use an alternative source of fuel.

David Edwards (1994) identifies the two main resin-tapping regions in the west of Nepal. West of the Karnali river resin tapping is managed by the government owned Nepal, Rosin and Turpentine Company Ltd (NRTCL) and four districts each contribute to resin production. These are Kailali (15%), Doti (25%), Dadelalhura (30%) and Baitadi district (30%).

In 1994, the company also started tapping in the Dhankuta district, (Sibhuwa Taklakharka is one of these FUGs which will be discussed in more detail later), and the Panchthar district, both situated in eastern Nepal. In total approximately 3000 tonnes of resin are collected every year in Total.

The second region identified by Edwards (1994), is east of the Karnali River, in the Salyan, Dang and Pyuthan districts. These forests have been leased by a private Indian company called Laxmi Rosin and Turpentine Company Ltd, since 1984. They tap roughly 6000-7000 tonnes of resin a year and pay the central government NRs 2 million a year.

The resin, which is supplied by 1.3 million trees, and local labourers, collecting up to 1000 blazes, is then transported to the government factory in Attarya, Kailali district (Edwards, 1994). Edwards, 1994, states that one source claims that the annual production from the government factory is nearly 1900 tonnes of rosin and 500 tonnes of turpentine, with an annual turnover of NRs 76 million from rosin and NRs 6 million from turpentine.

In the west, after the 1930's synthetic products based on coal-tar gradually replaced natural resin and turpentine, it remains an important industrial input in South Asia.

The only international market to receive rosin and turpentine from Nepal is India. NRTCL sell 75% to India, mainly to Delhi but also Punjab, Jambu, Kashmir and Calcutta and 25% is sold internally, through depots in Kathmandu, Birganj and Biratnagar (Edwards, 1994).

Nepal's trade with international markets is partly due to the physical positioning of India with Nepal, preventing contact between Nepal and other international markets, but is also due to convenience, as India supplies Nepal with a sufficiently large demand for the by-products, another limiting factor that are preventing them from exploiting a larger market. One major downside is that rosin and turpentine are sold to India for lower prices than if they were sold on the global market scale and it is likely that the supply will soon exceed local demand in the future.

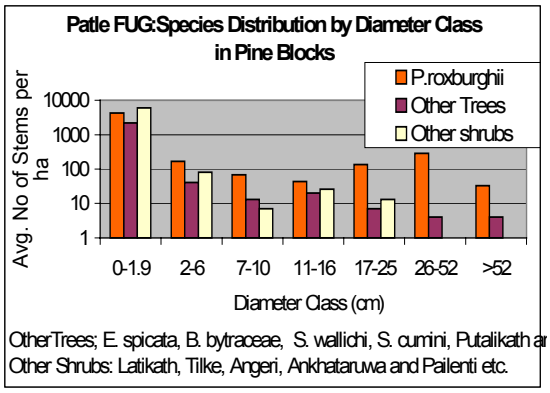
Nepal has faced many challenges that are preventing them from exploiting the global market. Resin producing pine trees are found globally, therefore many countries would prefer to process it in their own country at a cheaper cost than importing it. As mentioned earlier, many western countries have produced imitations of the products, which they are able to process for lower costs than it would to export them from Nepal. Also, the Kraft pulping process of pine wood produces a valuable chemical by-product called Tall oil, which contains 40-60% resin acids. This may be used to produce the same by-products of resin processing; for example, over 50% of the US turpentine production is from this source (Mirov, 1967). The future growth of the resin processing industry in Nepal does depend greatly on exploiting a larger market as well as modernising the processing procedure so that it may be able to compete with Western markets (His Majesty's Government, Nepal, 1988).

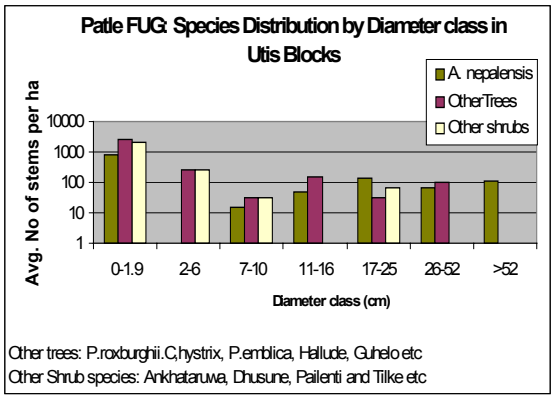
Resin tapping is considered to be a highly effective form of income generation within community forestry. Resin collectors can earn good incomes to feed their families, acquire valuable skills that may be passed down through generations, and provides interest and awareness that may help to sustain the forest in the future.

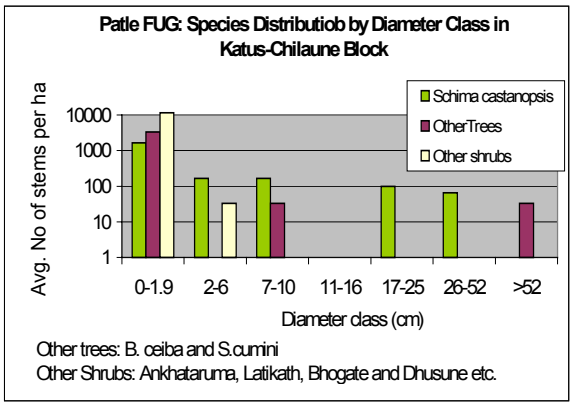
5.4 Economic Development of Patle Sanne FUG through Resin Production

Patle Sanne Community Forest has an area of 147 Ha, and lies on a gently sloping East-facing ridge at an altitude of between 800-1750M. It is only 30 minutes to district headquarters, having the Dharan – Dhankuta motor-road just below it. The FUG was formed at the initiation of the DFO, and the forest was handed over to the community in 1994. There are 287 households members of the FUG, which gives a Forest area / Household: 0.51 Ha – somewhere near the mean for FUGs.

The Forest is Composed of 10 blocks where Pine is dominant, two blocks of Utis and one block of Katus-Chilaune and other associated species. The forest is in good condition, and is made up of mature to 'over-mature' stands (i.e. beyond a suitable age for commercial felling).







In the pine block there is regeneration of about 10,000 seedlings per ha which is satisfactory, but only about 100 stems per ha of sapling and pole size plants, which is quite low for sustaining product availability in the future. In the pine block over 50 trees per ha are over-mature. These are not being utilised for timber because of both DoF restriction on felling, and because there is no local use for pine timber due to parasites. In other blocks regeneration of desirable species is also low and not well represented in all size classes. In Utis block, some trees are at harvestable stage.

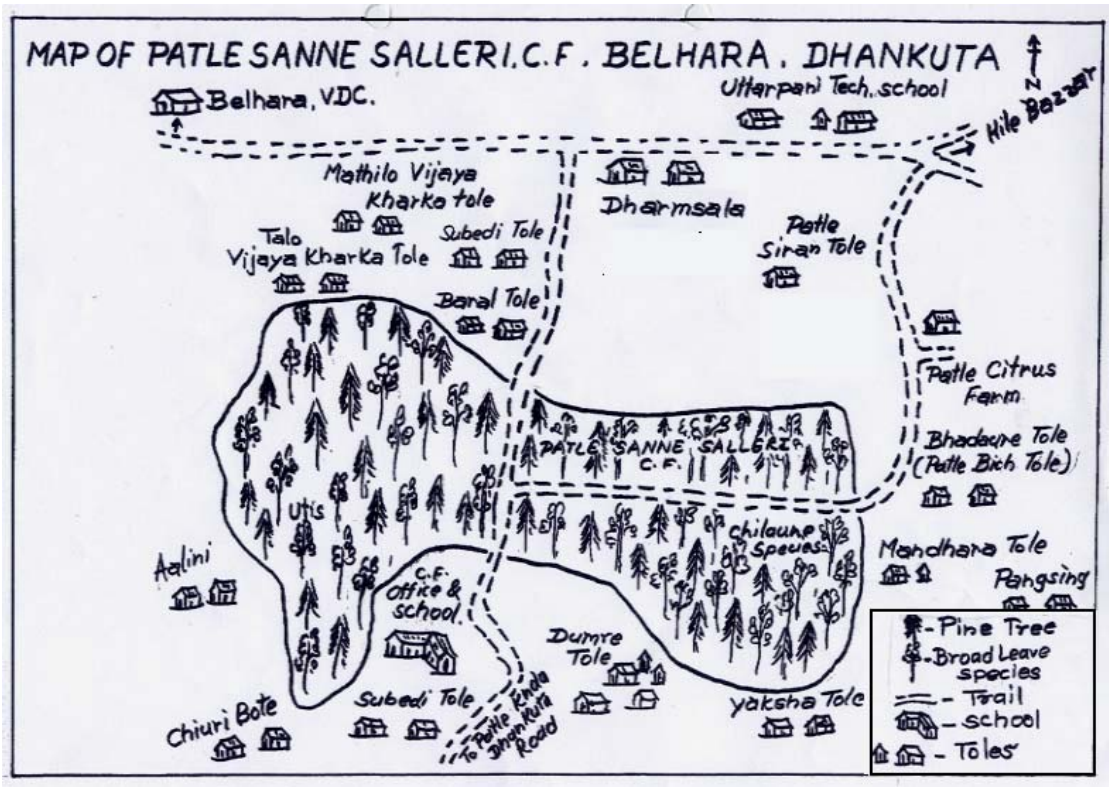
Forest Management: FUG is operating two nurseries for the plantation in CF and Private land. Resin collection in Pinus block is going on through user group.

The main Benefit Flows are employment opportunities for over 20 poorer households as resin collectors, and the high income from resin, used for community development projects.

There are further Potentials for development. The main ones are as follows:

- Plantation of Amriso in erosion-susceptible area.
- Income generation through livestock raising and milk production.
- Timber marketing from utilisation of over-mature trees
- Incomes could be invested for community development activities and support for poorer group income generation.

Map 1: Sketch Map of Patle Sanne Salleri Community Forest:



Fund Generation

Patle Sanne FUG's fund level stands at around Rs250, 000, with an annual income level of around Rs.150, 000. This indicates that both much is being generated and much is being spent.

In Patle Sanne FUG two thirds of the fund is generated through resin tapping and marketing, and the remainder is generated through the sale of saplings and timber. Income from seedling production is through the FUGs two successful nurseries. The seedlings are sold by the FUG to private households and other FUGs for planting in forests and private land. The nurseries were established by the FUG without outside support. The FUG is also keen to move into marketing timber in the near future, as there arte many over mature and fallen pines in the community forest which are being under-utilised at present, because all local timber needs are already fulfilled.

Resin is the only NTFP that is utilised in Patle Sanne. A few medicinal plants grow naturally within the forest, however there is little knowledge about processing and marketing; they are only for personal use with the community. .

In 1987 when the forest was still managed by the DFO, an agreement was made with Herbs Production and Processing Company LTD (HPPCL) to tap the resin, and the DFO received royalties for the use of their trees. In 1994 when community forestry was introduced the agreement was handed over to the community, so that they could tap the resin themselves and then sell it to HPPCL.

The Government company pays both the resin collector and the FUG. The resin collector is payed NRs 5.50 per Kg of resin. The FUG is payed a further NRs 3.30/Kg to the fund. The HPPCL are responsible for the training and technical supervision. The pine timber can also be sold for NRs 2/ft^2 to users.

Resin is tapped by making a series of v-shaped grooves in the bark of the tree down which the resin runs, collecting in a tin at the bottom. In one month a tree of roughly 36 inches in diameter produces 2 kg of resin, which is then carried to the collection depot. The resin-tapping season lasts for 8 months of the year. Two months are spent cutting and preparing the trees and for six months, from May to October, resin is tapped.

One tree gives around 1 - 2kg of resin/month over 6 months of the year, or 6 - 12Kg in total over the year. In this way, at the rate of NRs 3.3/kg, in a year each tree which is tapped provides between Rs. 20 - Rs. 40. to the FUG fund. With approximately 8000 trees in the Patle forest, this would give 8000*40 NRs 144,000 – Rs. 320 000 / year. The actual income tends to reflect the lower figure:

In 1995, earnings from resin production to the fund were NRs 128, 000. In 1996, earnings were NRs 133, 000, and in 1997, they were NRs 147, 000. This level of earning is likely to continue into the future, subject to price stability.

There has been a slight increase in the earnings from resin production from 1995 to 1997, The income produced from resin production depends on how hard the resin collectors work and the amount of trees that are tapped, as well as on the weather conditions throughout the collecting season.

The Resin Collectors
Within Patle Sanne FUG 21 male members of the FUG are responsible for tapping roughly 400 trees each, during the tapping season. Resin is usually carried to the depot by the wives of the collectors.

Each collector may collect between 1-2 Kg of resin from each of 400 trees for about 6t months of the year. At the lower estimate this adds up to 2400Kg of resin, which at Rs. 5.5 / Kg. Equals an annual income 13200Rs per year for about for 8-9months work.

During the resin collection season the collectors are also responsible for guarding the forest, to prevent illicit cutting of timber. When the tapping season finishes four men from different toles within the FUG, are employed as forest guards. They are paid about NRs 1500 a month and carry out their job efficiently.

The resin collectors lack confidence in their understanding of the technical aspects of resin collection. Hence they feel dependent on the resin marketing company for training and guidance. However they do feel a wish to become more independent from the marketing company and wish to more fully understand how to market resin themselves, and wish to cooperate with other resin producing FUGs in the area to collectively market, and get best price – with help of FECOFUN if poss.

On the other hand some of the collectors do have ideas how the methods of tapping could be improved, for example the tree should be cut with a fencing knife rather than a *basila* which damages the tree, and others suggested planting more Chir pine trees, so that they could increase their resource.

Last year, the FUG awarded prizes to the four resin collectors with the best cutting technique. This year no one was responsible for judging, so no prizes were given. Three years ago the company used to award prizes to the collectors, but this no longer takes place and they now only monitor their progress from time to time and train any new collectors. Activities such as these provided an incentive for the collectors to work hard and take more pride in their work.

The resin-tapping households felt they had benefited from the community forestry project and identified the main benefit to be the continued availability of resin tapping, which had provided

them with a steady income, with which to feed their families. The collectors also said that they were involved in the decision-making with regard to tapping policies, but thought they should be paid more by the processing companies.

When the collectors were asked if they had benefited from being part of a Resin Network, they agreed they had, as they said the Network had helped to resolve conflicts and has given them advice.

The resin collectors recognised tapping as a valuable skill that may be passed down through generations to come. They see the Chir pine tree as a valuable and sustainable resource that will provide an income for them for many years, so that they may continue to feed their families, as well as generating revenue for the fund, to improve village infrastructure.

They identified that tapping is time-consuming, *so less time can be spent in their fields* and they are often unable to utilise their agricultural land to its full potential. They also feel slightly restricted by HPPCL, the resin processing company that operates in the area and feel they should be paid more.

Fund Mobilisation in Patle Sanne FUG
It is through their organisation and ability to tap efficiently, that the fund is thriving and currently contains NRs 250 000 (as at 1999). Assembly meetings are held regularly, to discuss various issues relating to community management, one of which is the utilisation of the fund. The way the fund has actually been utilised reflects that although there has been a diversity of interests involved in decision-making – it is often the priorities of the richer members of the FUG, as committee members, who have exerted most influence. The poor and disadvantaged groups may not always attend the meetings and when they do are usually silent. The richer members of the committee and FUG have predominated the decision-making – reflected in the fact that expensive electricity provision has been made. Nevertheless the interests of all groups have been reflected to a greater or lesser extent, and micro-credit facilities have also been introduced to help the livelihoods of the poorer households. Women members do feel excluded from meetings, both by the difficulties of finding time to attend and by the behaviour of male members when they speak up.

Revenues have led to large-scale development work:
Clean **drinking water** had been piped from the source above Patle Sanne and was directed through the FUG, down the main pathways. Thus, the water is now more accessible for all within the community. The rich of the community can also afford to install water pipes onto their land to prevent them walking any distance at all, however, the poorer families cannot afford to do this, so still have to walk for 10 minutes, to fetch water; obviously this distance has been greatly reduced, since pipe installation.

The fund has also been used to **upgrade the schools** in the area and enhance their physical facilities. Donations have been given to agricultural groups for the construction of public buildings, in which to hold meetings and also for help during natural disasters, such as, forest fires and land slides. The women within Patle Sanne have become much more involved in the decision-making and are being encouraged to participate in forest management. There are now two female members within the FUG committee and they are also responsible for making sure the women within the community are informed of the assembly meetings and are aware of the relevant issues. From the fund, credit has been given to the women for income generating activities, such as, kitchen gardening and goat rearing. However, the results from the household survey, discussed previously, indicate that it is the husband who attends the meetings without his wife.

By the end of this year, **electricity** will be available in many parts of the village. However, only 60% of the community will be able to afford to install it into their homes and the poor will

again, have to go without. The men identified one of their future needs as the building of a bridge across Patle Khola, which they can take a short cut across, to market.

This year FUG has allocated some funds for **micro-credit** to individual households for Income generating activities, and has also set aside contingency fund for local welfare needs and emergencies.

In 1998, the fund was also used to subsidise a two-day seminar, which, was held in Patle Sanne, and involved all the forest users from the FUG. They also invited forest users from the whole of the Village Development Committee (VDC), to discuss ideas about management and forest product utilisation.

The VDC in consultation with the FUG has over recent years gradually stopped development funding to the village because they generate sufficient funds of their own. This allows the VDC to concentrate its resources on other villages with lower FUG incomes.

The preference rank was carried out at the group meeting in ward 3 (Table 1.6) to identify how the villagers thought the fund should be utilised. However, in wards 1 and 2 the villagers were asked their preferences, but no ranking was completed (Table 1.7).

The main priorities for fund use suggested by the forest users are electricity and irrigation, and also skill-based learning, which was specifically a priority for the women.

Community Development and Community Issues
Communities from upper toles have been gradually moving out, due to the expansion of private tea-estates. Some households are moving to lower areas, some to local areas outside FUG, and some to Terai. This out-migration, which was gradually increasing, is now being reversed due to the benefits from the FUGs community Development.

General Reflection on Patle

The fund raising in the Fug has pushed them to think of wider village development and the drinking water supply to houses provided by FUG money has led to many households starting kitchen-gardens.

FUG village development programmes very popular. CF has led to less out-migration
Villagers don't get firewood but do get drinking water. Also support to school and two nurseries supplying trees for private planting.

Employment – 21 people involved in resin collection. They have started regular Resin collectors monthly meetings and saving scheme – each giving 100rs/month.

Market access – road nearby allows them to take advantage of resources – there are many FUGs with resin producing forest but no market access.

There is under utilisation of timber due to DFO restriction on timber selling.

The FUG is considering marketing resin privately, rather than through FD marketing agency, which gives rate, lower than commercial rate. Want to co-operate with other FUGs to market resin collectively.

5.5 Resin Producers Network: Future Potentials for Improved Marketing of Resin:

Although the community are profiting sufficiently from resin production, HPPCL are a government owned company that are providing a below market rate for resin. Some private

traders came to the village in 1997 and offered up to 15.5Rs total/Kg to user group. Evidently the govt. rate below market rate.

The resin network was established by the Federation of Community Forestry Users of Nepal (FECOFUN) in September 1999, partly in a response to recognition of the possibility of finding an increased rate for the resin. Meetings had been held every month and during this research the third meeting was attended. Representatives from each of the 8 FUGs in the Dhankuta District had been selected as the members. These include Dumre, Belhara, Muga, Chungbang, Telia, Falate, Monabuduk and one from FECOFUN, as well as a further 3 members appointed as advisors, one from the DFO, one from NUKCFP and one from the District Development Committee (DDC).

The main points discussed so far had been the conflicts that had arisen, elsewhere, from companies that have not paid the full amount that was owed to the FUG for tapping the resin. These companies are then blacklisted for future contracts and companies that are prepared to pay higher prices than the government owned companies, will be targeted for future marketing. Both HPPCL and Surya Rosin Company Ltd, which is privately owned, were recognised as being reliable and the Nepal Rosin and Turpentine Company Limited (NRTCL) has been blacklisted for causing conflicts in other user groups. On the 22nd of December 1999, it was decided that the members should donate NRs 100 to a Resin Network fund at each meeting. The fund only stands at NRs 400, as only 4 members attended that meeting and shall be used for any necessary support to the resin collectors. It was also decided that they should meet every 2 months from then on.

The resin collectors recognise the potential of marketing resin as a NTFP for income generation within the community. However, they do not have the knowledge or know how to promote or increase production for the future. They recognised that being part of the resin collectors network was important to create a better understanding and awareness of market issues, as well as providing them with important advice about entering into contracts with reputable companies. The network is therefore essential in providing a support structure to improve the bargaining power of collectors in the future, in order to increase revenues from companies. For the expansion of resin production and marketing in the future it is important that FUGs become part of the resin collectors network.

5.6 Challenges to Resin Marketing – Contextualising FUGs' experiences

Resin marketing has been successfully established in Patle FUG and has generated a substantial fund that has been utilised effectively within the FUG. A look at other FUGs involved in Resin marketing highlights the possible challenges they can face. In Sibuwa Taklakharka FUG, another resin-producing FUG in Dhankuta district, however, resin collection has led to a conflict between the FUG and the processing company that has still not been resolved and the potentials of resin production are not recognised by the villagers.

Sibhuwa Taklakharka FUG, has stopped resin marketing due to a conflict with the marketing company Nepal Rosin and Turpentine Company Ltd. (NRTCL) over lack of payment. Prior to the formation of the FUG NRTCL had an agreement with the DFO. Although a new agreement over resin sale was reached with the FUG in 1994, NRTCL has not yet payed for the resin it took over the period 1994-1999 (a figure of around Rs. 120,000)

The problems Sibhuwa FUG is facing are compounded by conflicts within the FUG. Problems had arisen around fund transparency, ex-committee members being implicated.

Sibhuwa Taklakharka is faced with many fundamental challenges in FUG management, and is badly affected by conflicts arising between committee members and the FUG as a whole. The physical characteristics of Sibhuwa, such as, the size of the FUG (number of users and dispersed settlements) the location of the forest in relation to the wards and limited access to market, create difficulties for the management of the FUG and lead to high transaction costs

to collective organisation. Awareness amongst members and the FUGC of their roles and responsibilities within Community Forestry is limited and without these fundamental ideas it is unlikely that resin production will be successful in the future.

In order to establish the potentials of resin collection for Sibhuwa FUG in the future, it is important firstly, to consider the physical and managerial constraints the FUG faces. The forest utilised by the FUG in Sibhuwa is twice the size of the forest in Patle. The FUG also includes 120 more household members who are spread over a much greater distance than the FUG in Patle and who travel up to 3km to reach the forest. This has a great effect on the management of the FUG, the larger the FUG the harder it is to organise meetings and prevent stealing. The positioning of the forest compared with that of the wards and toles within a FUG is also important for accessibility. In Sibhuwa the forest is situated on the right hand side of the settlement, which restricts access for villagers in wards further away from the forest, whereas, in Patle the forest is central to the FUG and easily accessible, by all users. Patle is 20 minutes walk away from the Dharan Dhankuta road and is therefore easily accessible from the market. Sibhuwa has no road and is a 4-hour walk from Dhankuta and the resin collection depot, which creates great difficulties when trying to market resin successfully. The physical characteristics of Patle are thus more suitable for resin collection and marketing, than in Sibhuwa.

However, to enable successful resin collection within the FUG, the fundamental issues of forest management and FUG organisation must also be secure. Patle have a committee who is well organised and meet every month. They are aware of their responsibilities to the forest and the FUG and generally, work with the community during decision-making. Due to the size of the FUG in Sibhuwa, it is extremely difficult for the villagers of the 9 wards and 29 toles to feel part of the same community. The committee are lacking in organisation and management skills and do not meet regularly for meetings. Patle on the other hand has had a lot of help in the past from NGO's and other outside organisations, such as, NUKCFP, who have given advice and aided the handing over of the forest, so their responsibilities towards the FUG are clear.

Political conflicts within Sibhuwa create differences of opinion, which are likely to hinder decision making for some time in the future, as it is an issue extremely difficult to solve. Sabula's other conflicts between the FUG and NRTCL, as well as conflicts between wards are not easily resolved. In order for the FUG to accommodate the idea of resin production in the future, the conflict with NRTCL must be resolved and a new agreement with higher payment should be sought with a reputable company.

As recognised in Patle another income generating activity besides resin production is the sale of saplings from their tree nursery. In Sibhuwa FUG the lack of water has prevented a tree nursery from being established and thus obstructs another form of income generation. If the FUG were able to generate a sufficient fund through the sale of saplings or through resin collection, then they could utilise it to enhance the basic infrastructure of the community. Such as, piping water, from its source through the FUG. This creates a viscous circle, as in order to enhance their quality of life they need to generate a fund and one of the ways this may be achieved is through selling saplings, which need water, but water may only be piped to the FUG with money from the fund. However, in Patle Sanne due to successful management of the FUG and dedicated resin collectors they have been able to generate a sufficient fund, which has been used to pipe water into the area, as well as creating many other benefits, one of which is the successful management of their tree nursery. This has created a virtuous circle of forest and FUG management.

Income generation through resin collection has not yet been successful in Sibhuwa FUG; more emphasis is needed in the management of the FUG and the forest and in team building within the community so conflicts between members may be reduced. One solution to the problem could be to split the FUG in Sibhuwa into two, creating two smaller FUGs, who could

utilise a smaller area of forest, which is closer to them and more manageable. Forest guards are also needed to prevent stealing and reduce accusations from one ward to the next as to who the culprits are. The money must be reclaimed from NRTCL, so that the fund may be restored to the correct amount.

It is important that the DFO and other organisations help with the handing over of the forests to the FUG, so that they are aware of their responsibilities and will manage the forest successfully, only then may income generation be considered as a viable activity.

In Patle Sanne, resin collection has shown to be an efficient form of income generation within the FUG. More Chir pine should be planted to conserve their resource and increase production in the future. The resin collectors network has also been recognised as a necessary component of successful resin collection, which is important in creating support and increased bargaining power within FUGs.

A support structure such as the resin collectors network has been identified as a vital component of successful management and marketing of resin within FUGs, which offers advice and increased bargaining power to the collectors.

6 Conclusion

Forest User Groups in the Middle hills of Nepal are at a key crossroads in their development. The forest resource in their care has generally improved, and the FUG institutions through which they manage the forests have mostly become permanently established and relatively robust. FUGs are now looking beyond just forest conservation and basic needs provision. They are able to effectively promote local development, and they are developing wider linkages, both through local networks and through NGOs and other support agencies. The District Forest Offices need to catch up with these developments, and provide recognition and support for FUGs' economic development. FUGs' economic development may be separated into 3 main areas: fund raising, fund management and fund mobilisation. There are a number of concrete measures which support agencies, chiefly the Department of Forests can take to help the FUGs in these processes. Moreover there is a need for an overarching supportive environment in regard to FUGs' market-related economic activities in regard to fund-raising.

Bibliography

Barraclough, S,L and Ghimire, K, (1995). Forests and Livelihoods: The Social Dynamics of Deforestation in Developing Countries. Macmillan, UK.

Chambers, R, (1983). Rural Development: Putting the Last, First. Longman, UK.

Chambers, R, (1997). Whose Reality Counts?: Putting the first last. Intermediate technology. London.

Chandrasekharan, D.(1998). Non-Timber Forest Products, Institutions and Income Generation in Nepal: Lessons for Community Forestry. International Centre for Integrated Mountain Development, Kathmandu, Nepal.

Edwards, D, M. Dec (1994). Non-Timber Forest Products and Community Forestry. NUKCFP.

Edwards, D, M, (1995). The Trade in NTFPs from Nepal: Institutions for Local Level Development. Nepal, UK Community Research Project. Kathmandu.

Graner, E, (1997). The Political Ecology of Community Forestry in Nepal, Saarbruken: Verl: fur Entwicklungspolitik, Saarbruken, GmbH.

HMGN (1998). Master Plan for the Forestry Sector, Nepal, Main Report HMGN/ADB/FINNIDA. His Majesty's Government, Nepal, Ministry of Forests and Soil Conservation, Kathmandu. 292pp.

Hobley, M, (1996). Participatory Forestry: The process of Change in India and Nepal. Overseas Development Institute. London.

Ives, J, D and Masserli, B, (1989). The Himalayan Dilemma: Reconciling Development and Conservation. Routledge. London.

Jackson, W, J and Ingles, A, W, (1998). Participatory Techniques for Community Forestry. IUCN.

Joshi, A, L, (1998). Status of Community Forestry in Nepal, A report Submitted to ANSAB, Kathmandu.

Maharjan, M, (1995). Income Generation through Community Forestry: Case studies from the Koshi Hills of Nepal, In Victor. M. (ed). Proceedings of a Seminar on Income Generation through Community Forestry, RECOFTC Report #13.

Mirov, N, T,(1967). The Genus Pinus. Ronald, New York.

Nichols, P. (1991). Social Survey Methods: A Field guide for development workers. (Development Guidelines No.6), Oxfam, UK.

NUKCFP, (1997), Community Forestry in Nepal, DFID, London

Parajuli, D.P, Gyanwali, A.R, Shrestha, B.M. (1998). Manual of Important Non-Timber Forest Products in Nepal. Project PD 103/90 Rev.1 (F). Institute of Forestry/ International Tropical Timber Organisation. The Training and Manpower Development in Community Forestry Management. Nepal

Pokharel Ridish, K, (1998). www.panasia.org.sg./nepalnet/forestry.

Prasad Dahal, S and Raj Bartaula, P. (1997). Income Generation through NTFP: Opportunities and Constraints. Experience from the Koshi Hills. Discussion Paper. NUKCFP.

Regional Community Forestry Training Centre: Community Forestry at a Crossroads : Reflections and Future Directions in the Development of Community Forestry.www.recoftc.org/publications

Richardson, D.M, (1998). Ecology and Biogeography of Pinus, Cambridge.

Scoones, I. (1998) Sustainable Rural Livelihoods : A Framework for Analysis Working Paper No. 72. Brighton: Institute of Development Studies.

Shrestha, K.B. (1996). 'Community Forestry in Nepal - An Overview of Conflicts', ICIMOD Discussion Paper Series No. MNR 96/2.

Shrestha, S, K, (1998). Benefits from Community Forestry: A Contribution to the Monitoring and Evaluation Process of Forest User Groups in the Koshi Hills. Nepal UK Community Forestry Project. Nepal.

Appendix: Details of FUGs Economic Development

FUG		Fund Level (Rs.) in 2056 /(2000)	Approx. Annual Income	Fund Source			Transparency	Embezzlement / irregularities	Fund Mobilised?	Credit for Poor?	Comment	FUG Support to Community / Other Organisations
No	Name			Royalties, etc.	fines	Active generation?						
1	***Bhalu-dhunga***	5,000	~500	Joining fees	fines	-	moderate	-	-	-	-	-
2	***Jalkini Katlar***	17,000	~4,000	royalties	fines	-	yes	-	• Nursery man salary • plantation	-	• Demand for credit from poor – not yet implemented	• Awards given for students of local secondary school
3	***Patle Sanne***	233,000	~150,000	timber royalties	-	Yes: resin	yes	• audit provision	• Community development • *MAP: Fund allocated for poor IGA*	-	• *Funds allocated for household IGA for poor through Micro-Action-Planning process*	• Donation to schools, local youth clubs, & Agriculture group building • Drinking water system installed • Electricity programme initiated
5	***Ramche Sunkhani***	94,000	~30,000	timber royalties	fines	Moderate: timber & levy	poor	• audit provision	• Built meeting hall • forest watcher salary • *MAP: fund for poor IGA*	-	• *Allocated fund for micro-credit to poor households for IGA through Micro-Action-Planning process* • Self-funded saving and credit group planning to borrow from FUG fund	• Donation to school & to bridge construction • Land purchased and community hall built in village
6	***Dharma Devi***	27,500	~6,000	royalties	-	Moderate: user levy	yes	-	• Allocated to buy land to plant forest • loan for IGA • forest-watcher salary	Yes	• Credit given to individuals for HH IGA (e.g. livestock) – nop collateral required	• Organising to buy land to develop new forest area
7	***Sibhuwa Salghari***	10,000	~4,000	royalties	-	Moderate: user levy	poor	• embezzlement by previous FUGC – not yet clarified	• loan (only with collateral) • support to school	-	• FUG behaves like a money-lender; lends on collateral at 24% p.a. If borrower can't pay deposited assets auctioned. • Poor cannot get loan: don't have collateral.	• Financial and timber support to school • *MAP: move to build Community Hall*
9	***Ahale***	50,000	~10,000	royalties	-	Yes: nursery profits	yes	• Minor irregularities - clarified	• loan for poor IGA • fuelwood harvesting employment for poor	Yes	• Giving loans on small scale for household income generating activities (e.g. goat and pig keeping). *This has become formalised through MAP process*	• Trail-making • Timber support for monastery construction
10	***Paluwa Pikhuwa***	11,431	~3,000	royalties	fines	-	yes	-	-	-	• No vision, objectives or planning	-
11	***Nakla Daskhate***	4,557	~800	royalties	fines	-	poor	• Poor record-keeping • Previous embezzlement not clarified	• Cardamom plantation	-	• No vision: unclear objectives	• Timber support to health-post, and VDC
13	***Bokre Danda***	7,000	~3,000	royalties	fines	-	poor	• Embezzlement by former FUGC	-	-	• No vision, objectives or planning	-
14	***Helebung***	5,800	~1,000		fines	-	poor	• Irregularities – Rs.2500 with previous treasurer	• Trail-making	-	• No vision, objectives or planning	• Financial support to trail-making

- Dhankuta district HQ visible across valley, accessible ½ hour by road
- On-farm trees visible on terrace bunds
-

- Mature Chir-pine forest
- Resin-taping activity visible
- Build-up of pine needle carpet on forest floor, not collected for compost.
- Sparse regeneration

- 1 of the 2 nurseries in Patle Sanne FUG
- managed without external assistance other than initial training.
- FUG have developed nursery management skills very successfully
- Main species are for on-farm needs: fodder and needs, e.g. firewood (Utis), fodder (Tanki, dudilo, khaniyo, nemaro), spices (tezpat)
- FUG also experimenting with protecting Sal wildlings in Nursery before planting out

- FUG group meeting held during research visit