

Non-Timber Forest Products and Community Forestry - A Tale of Two Villages

Many rural people harvest non-timber forest products (NTFPs) for food, resources and supplementary income and forms a key component of community forest management. It is therefore vital to understand how different approaches to community forestry impact the way in which local people can use forest resources and benefit from the available NTFPs. A new SANDEE study from Nepal investigates this important question.

The study compares the experience of people living under an informal and a formal community forest management system in Pyuthan district. It finds that under the informal management system NTFPs make a higher contribution to household income than under the formal system. It also finds that poorer households, who are more dependent on forest products, are more significantly affected by forest management rules and regulations than their richer neighbors. To help these poorer households, the study proposes some changes in the formal management system rules.

INVESTIGATING FOREST USER GROUPS

This study is the work of Arun Khatri-Chhetri, formerly from the Institute of Agriculture and Animal Science at Chitwan in Nepal. The field work was undertaken in 2003 in the Pyuthan district of Nepal. Almost 60% of the total land area in the Pyuthan region is forestland and of this 48% is under government-initiated community-based forest management organized through 280 Forest User Groups (FUGs). Although agriculture is the main occupation in this area, forestland is an indispensable resource for farmers. In particular NTFPs are collected across the region from both common and private forests and are either used directly by households or are sold commercially. Taken together, these factors make the Pyuthan district an excellent area for studying NTFP use.

Arun examines NTFP extraction in two communities: The first is the village of Chuja, which is located centrally (within 5 km of the district administrative headquarters) and has a government-sponsored formal forest user group (FUG). The second village studied is Gobanpani which is more remote than Chuja (located about 18 km from the district headquarters) and has a self-initiated informal forest user group. The FUGs in these two communities are classified as 'formal' and 'informal' based on their legal registration at the district forest office. The primary distinction between these two types of FUG is that the forest user committee of the formal group is recognized and sponsored by the state. However, regardless of which type of FUG they

THE NEED FOR BETTER COMMUNITY FOREST MANAGEMENT

Forest management in the developing world is a key area of policy research and dialogue. Since it is expensive to conserve and monitor forest use, governments and international donor agencies are looking for ways to transfer greater responsibilities to local communities. Many communities are, however, suspect of government intervention as they fear loss of their traditional rights. This is a critical concern for those who depend on local forests for their survival and are therefore demanding greater control over local resources. This situation of conflict between governments and communities is seen to varying degrees throughout the developing world.

Nepal is a prominent example of this "pressure" in forest management policy. The history of forest policy in Nepal began with a move from privatization to nationalization. This contributed to the deterioration of forests and the livelihoods of the poor. After the 1990s, community forestry has received high priority. Currently, indigenous and government sponsored forest user groups are the main local-level forest management institutions in Nepal. However, in the process of creating new institutions, there is always the danger of destroying indigenous systems. Several studies have reported that forest cover and biophysical conditions have improved in many places under the protection and care of community forest user groups. However, there is an urgent need to investigate how different types of formal and informal forest management affect the distribution of benefits to local communities. Arun's paper seeks to fill this gap.



belong to, local people treat indigenous forests as a common property resource that is referred to locally as *Hamro Ban* (our forest).

RULES, REGULATIONS AND RURAL LIVELIHOODS

To investigate the impact of forest management systems on people's access to NTFP, Arun looks at the rules and regulations of NTFP collection in both the formal and informal forest management systems. He investigates what percentage of household income comes from NTFP harvest if this differs among the households due to socio-economic and institutional factors.

Table 1: Rules and Regulations Governing Collection and Management of Forest Products

Rules and regulations	Formal FUG		Informal FUG	
	NTFPs	Timber	NTFPs	Timber
Quantity restriction	Limiting through number and period of entry	FUGs have legal right to cut and sell	No restriction	FUG have no legal right to cut and sell
Entry fees	NRs. 15/person/day	No fee	No fee	-
Monitoring	Watchman and villagers	-	Watchman	-
Organizing investment for maintenance and conservation	Low	High	Low	Low
Payment for watchman	By FUG from collected fund		Agricultural products by all users	

Primary information on the collection and use of NTFPs was gathered through a questionnaire survey of 100 households in the two communities (50 from each). As Arun aimed to determine the relative importance of income from NTFP, he gathered a wide range of information on food production and household income and expenditure. Households were stratified into 3 categories based on the landholding size — large, medium and small to indicate a household's wealth status.

The study calculates income from the NTFPs by multiplying the total quantity of NTFPs collected for 12 months by their respective average prices. Many NTFPs are not traded in formal markets but are traded or bartered locally. To value these forest products a number of different methods are used. For example, fodder and grass are non-marketed NTFPs, however some households barter them for grain in the dry season. Since grain is a traded product, the amount of grain exchanged for the NTFP was used to calculate the value of fodder and grass.

Table 2: Average Value of NTFPs Collected by Households (NRs)

NTFPs	Formal FUG % of households collecting NTFPs	Mean Value (NRs.)	Informal FUG %of Households collecting NTFPs	Mean Value (NRs.)
Leaf-litter	80	140	88	1,743
Grass	86	248	82	796
Fodder	0	0	98	3,689
Fuelwood	92	688	100	8,759
Thatch Grass	82	438	0	0
Total		1514		14,987



HOW IMPORTANT ARE NTFPS?

It is clear that off-farm income is the most important source of money in both communities as it contributes 55% and 62% of total income in the formal and informal FUG areas respectively. Off-farm income is derived from work such as non-agricultural labour and government service. However, this should not be taken as evidence that NTFPs are unimportant. Overall NTFP collection is vital to the livelihoods of people in both communities. For example, grass and leaf-fodder supports subsistence agriculture and livestock farming and firewood is necessary to meet household energy needs. The other economically significant NTFPs are leaf-litter and thatch grass.

The economic importance of NTFP-based income varied significantly between the two communities. Overall, the total value of NTFPs collected from the forest is significantly lower in the formal FUG areas. For example in the lowest 25% income bracket, NTFPs account for only 2.1% of total household income in the formal-FUG area. In the informal-FUG area, they account for over 19% of total household income. The equivalent figures for the top 25% income bracket in these communities are 1.13% and 13.9% respectively.

Data reveals two things: (a) household dependence on NTFPs decreases as incomes go up, i.e., poorer people get a larger share of



total incomes from NTFPs; and (b) aggregate collection of NTFPs increases with income level. In other words, poor households use fewer forest resources than the rich households because the poorer a household, the smaller its livestock and land holding, and a lower demand for intermediate forest products such as grass, fodder and leaf litter. However, it also implies that the poor would be relatively worse off if their access to NTFPs declines.

Table 3: Income from NTFP Collection from Common Forests as a Proportion to Total Gross Household Income Classified by Wealth Groups

Community	Wealth groups and % contribution of NTFPs			
	Lowest 25%	25-50 %	50-75 %	Top 25%
Formal FUG	2.10	1.74	1.30	1.13
Informal FUG	19.52	18.49	12.34	13.90
Total	12.56	11.67	6.63	5.69

THE IMPACT OF THE MANAGEMENT SYSTEMS

The rules and regulations regarding NTFP and timber collection are different in the two FUGs. In the informal FUG village, the institution has evolved over a number of years and the customary rights of the users are recognized and identified. The informal FUG imposes restrictions on timber and green fuel wood collection but allows free and open NTFPs collection throughout the year.



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In the formal FUG system, forest department officials help formulate the rules and regulations. NTFP collection periods and collection techniques are limited and regulated in order to enhance the regeneration and production of NTFPs. For example, branch lopping and uprooting, are prohibited. The collection time in the formal FUG-managed forests is short, and the forest is guarded by paid watchmen.

Analysis of the socio-economic details of the households reveals that three factors have a statistically significant effect on NTFP extraction in the informal FUG village. These are family size, landholding status and the distance that people live from the forest area. Larger family size implies that a family has more labour, while larger landholdings leads to a greater demand for manure. It is therefore not surprising that these factors have a positive effect on NTFP collection. Expectedly, the distance from the forest has a negative effect on NTFP income.

In contrast, these three key variables have little impact on NTFP collection in the formal FUG village. This suggests that NTFP collection in this village is constrained by regulations in such a way that collection cannot increase even if there is more labour, demand for manure is higher or if people are close to a forest. It is clear that in the formal FUG area, all households collect NTFPs during the period when the forest is open, whatever the distance they must travel. In contrast, in the informal FUG area, households near the forest visit the forest more frequently than those living further away.

HELPING THE POOR TO BENEFIT FROM NTFPS

In conclusion, it appears that the lower income from NTFP collection in the formal FUG managed forest is due to the more restrictive rules and regulations imposed and the poorer households are most affected by these rules. In this sense, the formal system is failing the poor, by not allowing them to benefit fully from the local forest resource.

As NTFPs are so important to the livelihoods of poorer households, formal forest institutions need to address this. One strategy that may help the poor – especially those who cannot use more agriculture and livestock related NTFPs – is the re-generation of commercial NTFPs in the formal-FUG forest. If appropriate harvesting rules and regulations are introduced, these NTFPs could be collected year round – as is the case in the informal FUG management system. In this way disadvantaged groups among forest users would be able to derive more benefits from their local forests and their incomes would improve.

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