Opportunities for leveraged interventions in high altitude NTFPs in the Karnali Zone

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Non-timber forest products (NTFPs) represent an important source of income in the Karnali Zone of Mid-Western Nepal. The Canadian Centre for Studies and International Co-operation (CECI) has completed a study in Jumla, Baitadi and Dadeldhura Districts which focuses on increasing stakeholders' knowledge on NTFPs in the Karnali Zone, emphasises the importance of marketing aspects, and identifies leveraged interventions.

The study identifies main market channels, their participants and their respective functions. The data on current markets were compiled and analysed to estimate the profit distribution and competitive position of NTFPs in this Zone. The study pinpoints the sources of support and potential for leverage, aiming at strengthening the marketing capacity of Forest Users Groups (FUGs) in Karnali Zone. The three key potential sources of leverage are: a) increasing the sustainable supply of high-value NTFPs; b) increasing the competition among traders in Nepalgunj (breaking the oligopoly); and c) policy leverage.

The identified opportunities for leveraged intervention are assigned high, medium and low feasibility ratings. The opportunities deemed as **highly feasibile** are: i) improving the supply of NTFPs through management and sustainable harvesting, including the handover of NTFP areas to FUGs. ii) increasing FUG legal awareness and capacity; and iii) improving market information systems.

The revision of national policies on NTFP-related issues was rated as having a **medium level of feasibility**. Supporting the production of Jatamansi (*Nardostachys grandiflora*) and Sugandhawal (*Valeriana jatamansii*) essential oils and increasing the marketing capacity of collectors were considered to have **low feasibility prospects**.

Keywords: Non-timber forest products, medicinal and aromatic plants, forest user group, Karnali Zone, Nepal

Non-timber forest products (NTFPs) are an important potential source of income for poor communities in the hills of Nepal. The most important category regroups medicinal and aromatic plants (MAPs) used by herbal medicine and essential oil industries. Every year, around 13,000 tonnes of NTFPs are harvested in the hills and mountains of Nepal. Almost all are sold to India for a total value of US$ 8.6 million per year (Edwards, 1996). NTFPs are a key source of income for some of the poorest people in Nepal. Harvesting represents around 20% of the cash income of the harvesters and is the second most important source of cash in Karnali after wages of seasonal labourers. NTFPs are the most important commodity exported out of the Zone. Given the above, and that the Karnali Zone is home to the people with the lowest human development index (HDI) in Nepal, there is little question of the potential role of NTFPs in the improvement of livelihoods and poverty reduction.

The Forest Act (HMG/N, 1993) and Forest Regulations (HMG/N, 1995) present the policy related to the collection, trade, distribution, transport, processing and export of NTFPs. In the simplest terms, policies relating to NTFPs and FUGs are progressive and open the door for better management and the effective promotion of NTFPs. However, this study highlights the problems involved in implementation.

NTFPs have considerable potential for FUGs. Groups can generate income from the collection of royalties, trade and even processing itself. This opportunity has not really been tapped because the concept of community forestry was initially created

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strictly to meet daily needs of fuelwood, fodder and timber, and to conserve and protect the forest. Managing the resource for local economic development is a new concept.

Despite this potential for FUGs to promote the sustainable management and marketing of NTFPs, implementation has been problematic, given the existing system and the lack of awareness of both government officers and harvesters. For example, District Forest Office rangers have difficulties correctly identifying NTFPs because they are often referred to by various local names. Concomitantly, NTFP harvesters of the Karnali Zone generally are not aware of the rules and regulations. Most of them believe that all NTFP collection and trade is illegal. Hence they are reluctant to provide any information about NTFP use, collection and trade.

The present paper examined marketing aspects and identified issues for intervention and investigation. The underlying purpose was to strengthen the overall marketing capacity of NTFP harvesters, FUGs, local traders and processors in Jumla district and the rest of the Karnali Zone. While the study focuses on Karnali Zone, the main findings are applicable to the entire Mid-Western Region (CECI, 1999).

Methods

The study involved reviewing of literature and meeting with different stakeholders in Nepal and India. Karnali Zone - the trade centre for the Mid and Far Western regions of Nepal. was selected the study area. The selection of NTFPs was based on the following criteria:

1. Abundance of resources with potential harvesting in commercial quantities;
2. Potential of sustainable harvesting, domestication and cultivation on private lands;
3. Sufficient economic value to attract local participation;
4. Established market demand;
5. Potential for value addition through improved trade and processing;
6. Harvesters' preference.

The Participatory Rural Appraisal (PRA) method was used to collect data from different stakeholders. Checklists were developed for interviews with harvesters, traders, processors and other organisations involved in NTFP sector. Data regarding supply, local trade and processing were compiled. For data analysis, the study team used the GEMINI sub-sector methodology along with CECI guidelines (Haggblade and Gamser, 1991). This involved the identification of the main market channel, their participants and respective functions, quantitative estimates and the analysis of the results. A preliminary sub-sector map was developed. Data on current markets in Nepal and India were compiled and analysed to estimate the profit distribution and competitive position of NTFPs in Karnali Zone.

Results

The sub-sector analysis of NTFP market channels revealed important lessons about trade and the accrual of benefits to the different actors involved.

First of all, traders are making the highest profits (Table 1). Jatamansi (*Nardostachys grandiflora*) and Sugandhawal (*Valeriana jatamansii*) roots are banned for export in their unprocessed form, and like many illegal products, margins and profits are high. In fact, Nepalgunj traders make the highest profit about 50 percent margins. The high risk/cost in trading illegal products partially explains this high margin. But this is not the only reason. Another factor that explains this high margin is the oligopoly position of the traders: their very small number makes price collusion likely. It is very difficult for other traders - especially small ones - to enter this illegal business.

This business is not a well kept secret. Nepalgunj traders routinely store large volumes of the NTFPs in well-known warehouses near the airport, and regularly ship hundreds of tonnes per year by truck across the border to India. By not intervening, the government is not only tolerating illegal trading, but more importantly also encouraging by default the illegal export of these NTFPs. Consequently, a high concentration of benefits accrue to a small number of traders in Nepalgunj and the Terai, at the expense of the Karnali based operators (ranging from harvesters to local traders/agents).

Being illegal, no duties are officially paid at Nepal or Indian customs. Of course 'fees' need to be paid at different points and these are higher than what legal duties would be (based on duty currently paid on legally exported medicinal plants). These fees are paid to get the raw product officially classified as either marc (by-product) or any other legally traded crop, or to avoid classification altogether. Conversely, when the export of certain products is legal, the risks related to trade are much smaller and trade is not as controlled by Nepalgunj traders, with more benefits remaining at the local level. Kutki, a medicinal plant which is legally traded in unprocessed form and which has a high market

Table 1: Profit margins for selected NTFPs (1997-98)

Participants	Buying price (Rs/kg)	Royalty (Rs/kg)	Production and marketing costs (Rs/kg)	Selling price (Rs/kg)	Margin (Rs/kg)	Margin (%)
Jatamansi roots (*Nardostachys grandiflora*)						
Collectors	n/a	n/a	34	40	6	7%
Village traders	40	n/a	3	45	2	3%
Airport traders	45	15	27	105	18	22%
Nepalgunj traders	105	n/a	25	172	42	52%
Indian traders	172	n/a	10	195	13	16%
Total	---	---	99	---	81	100%
Kutki Roots (*Picrorhiza scrophulariiflora*)						
Collectors	n/a	n/a	45	55	10	11%
Village traders	55	n/a	3	75	17	19%
Airport traders	75	10	27	150	38	43%
Nepalgunj traders	150	n/a	10	170	10	12%
Indian traders	170	n/a	10	193	13	15%
Total	---	---	95	---	88	100%

Source: Estimated from the information given by traders' survey during the study, DFO records.

Note: The profit margin (Rs/kg) is estimated as follows: the selling price - (buying price + production and marketing costs). The profit margin (%) is the percentage of the total profit, not the percentage of profit on one individual operator's transaction.

value, is a case in point. The airport and village traders make the largest profit margins of 43 percent and 19 percent respectively (Table 1). The data in Table 2 show that Nepalgunj traders generate the largest profit, despite the fact that they are the smallest group of traders. Their strengths are the long-term relationships with Indian buyers, established network with officials for illegal export and their geographic position/control. The airport traders also have obtained an important part of the final value but bear higher risks related to the transport and weather conditions in the Karnali Zone. They depend on Nepalgunj traders since they have difficulty establishing direct market linkages in India.

One key finding is that local processors make a very limited profit from the sale of essential oil. Indian processors buy Jatamansi from Nepal at Rs 172 per kg while local processors pay Rs 40-50 per kg for the raw material. This important difference in price should constitute a huge advantage for the Nepali processors, since a very important proportion of the price difference comes from the transport cost and profit margins of the raw plants on their way to India. But despite this apparent advantage, local processors have a hard time competing with the Indian traders and oil producers. This paradoxical situation can be explained by several factors.

- Both the local processors and Indian ones make higher profits on their marc (by-product) selling business than on the sale of oil *per se*. Marc is sold to the incense industry in South India, while oil is mostly re-exported out of India.
- The Indian traders buying the marc from Nepal or in India are said to remix it with "fresh" Jatamansi root for sale to oil processors, in effect adulterating the products with a percentage of "oil-less" roots.
- Indian processors process a much larger volume of products and by-products and therefore have lower production costs. They can also use their processing units all year round, making more cost effective use of their installed capacity.

The intermediary traders between the Karnali processors and Indian export agents and the current ban on exporting the raw plants make new entries difficult, transaction costs high, and appear to be lowering profits for the Karnali processors.

Another limitation identified is the lack of quality control technology at local processing plants in Karnali. The traders interviewed during the study said that the quality of oil produced in Karnali was high but uneven. Indian and international markets value not only excellent quality, but also uniformity in product characteristics.

Recommendations

Four major recommendations are related to the ban on export, support to local processing, FUG awareness and capacity, and market intelligence and price information. Over-riding all of these is the importance of improving the sustainable management and marketing of NTFPs by FUGs.

First of all, it is important to re-examine the ban on the raw export of key NTFPs. If the ban is not

Table 2: Profit distribution in 1997/1998 for Jatamansi Kutki and Gutchichyau

Participants	Total Estimated Profit (Rs)	Estimated Number of Actors	Estimated Profit per Person (Rs)
Collectors	8,772,000	12,000	731
Village traders	3,422,000	70	48,885
Airport traders	12,138,000	30	404,600
Nepalgunj traders	12,600,000	5	2,520,000
Indian traders	8,455,000	60	14,091
Total	45,387,000		

Source: Information from traders' survey during the study.

Note 1: Indian traders are in fact Commission Agents: they do not assume much risk and almost no cost, and take a fixed commission of 7% out of the Nepalgunj trader selling price.

Note 2: The number of operators at each stage is estimated and averaged to portray the flows meaningfully. For example, there are more than five traders in Nepalgunj, but since 70% of the trade is done by only three of them, using a figure of five seems to represent reality adequately.

Note 3: The total profit was estimated after evaluating the total quantity of NTFPs traded in the Karnali Zone. It was assumed that for the selected species, the Karnali Zone was the only supply source for Nepalgunj traders and represents 80 percent of the supply source for the concerned Indian traders.

lifted, the potential to re-distribute more of the profit margin to the Karnali-based operators will remain very limited. National legislation forbids the export of key NTFPs in their unprocessed form. Only a small percentage of the raw plants are processed in Nepal - despite the ban - mainly because of a cost advantage in India. It is therefore time to re-examine the ban on export of unprocessed NTFPs which is clearly counterproductive at the moment. The whole sub-sector, through more transparency, competition and lower transaction costs, would improve without the ban. Government revenue would also increase.

In fact, we argue that the legalisation of this trade would benefit local harvesters and traders. Greater competition, legal status, and less spending on unofficial "fees" would reduce transaction costs. Since Nepal is a price taker in this commodity, legalisation would increase local prices while enhancing official government revenue. This trade, at present so secretive, would no doubt be more transparent if it were legalised. This transparency would have benefits for the sub-sector as a whole, and these benefits would be substantial to the Karnali based operators.

Second, while local processing by FUGs receives attention at almost every meeting on NTFPs, we argue that this intervention has very low feasibility prospects and urge promoters to reconsider. On one hand, the call for support for local processing is heard from the people and donors alike. The local people and several FUGs in Jumla have shown a great interest in processing NTFPs locally. They are looking forward to accessing credit and technical support to start such enterprises. Many different projects also appear to favour developing local processing of NTFPs by FUGs.

Notwithstanding this interest, this study reveals significant barriers and challenges in processing. Jatamansi distillation plants require good technical and management skills to ensure constant production and quality. They also show that Indian and international markets are difficult to reach, and that little profit can be expected in dealing with the Nepalgunj oligopoly. NTFP processing is not an easy enterprise for a community group with very limited technical and marketing capacity. To ensure the viability of such enterprises, it is proposed that FUGs gain some experience in collective harvesting, management and marketing of NTFPs in a raw form and simple value-adding activities prior to investing money and time in NTFP processing.

Only if and when Nepali processing enterprises are as efficient as Indian ones, and when the Nepali oil trading enterprises are able to sell directly to Europe and pay higher prices for the oil in Nepal than the Indians do, will there be growth prospects for the Nepali processing industry. There are no such indications at present, and improvement will depend in part on the establishment of new large Nepali oil traders in Kathmandu able to compete with the Indians on the European and North American essential oil markets.

Third, there is a fundamental need to increase FUGs legal awareness and capacity. As documented in this study, NTFP harvesters are seldom aware of their rights with regards to NTFP collection and trade. Most of them do not make the distinction between the Forestry Acts, Rules and Regulation and what the DFO staff tell them. Many believe that any NTFP use or trade is illegal. There is a need to inform harvesters about the current legislation relating to NTFP harvesting and trade in both community forests and government-managed forests. FUGs' awareness about their rights, the

means to exercise these rights and defend their interests in general must be further developed. Three main issues have to be clarified between the DFO and the FUGs. These are: the collection of royalties for NTFPs harvested in Community Forests; the trade of NTFPs by FUGs; and the handing over NTFP areas to FUGs.

Fourth, the study highlights the potential benefits of improved market intelligence and price information, especially as a way to improve bargaining power at the local level. NTFP trade is often very specialised and small, with end markets all outside Nepal, so that reliable information on price trends is extremely important. The secretive nature of the trade makes access to price and other market information difficult and unreliable. Radio Nepal could be used to disseminate prices during the important collection and marketing seasons, but this needs to be done in a reliable way. Perhaps the MFSC and other partners could support the Federation of Community Forest Users, Nepal (FECOFUN) in including such price information in their weekly 30 minute national radio programme. The difficult part is not putting the information on the air, but rather finding a reliable way to obtain it. The next important step is discussing the implications for prices in Karnali. Knowing about the price in Lucknow and Nepalgunj is important, but understanding all the other cost items to take into consideration before bargaining for a village or airport price in the high hills is also crucial. The costs associated with loans, price fluctuation risks, weight loss, transport and storage fees, delays, as well as those associated with payments of licences, permits, royalties taxes and other unofficial fees, must be well understood in order to use any Indian market price information effectively.

Conclusion

The study was the only a first step in identifying potential interventions.

While this study has contributed greatly to our understanding of the sub-sector, there remains a need for a Comprehensive Study on Global Supply and Demand. A more thorough study is needed to get the broader picture of the place of Karnali in Nepal, and of Nepal in the Indian subcontinent and internationally in the NTFP raw, marc and oil markets. More information is also required on the supply of NTFPs in other countries, and international markets for Morel mushrooms (also known as Gutchichyau or by its scientific name: *Morchella conica*) and essential oils made from the distillation of Jatamansi, Sugandhawal, Bojho (*Acorus calamus*), Juniper (*Juniperus* sp.), Sunpate (*Rhododendron anthopogon*) and Lichen (*Parmelia* sp.).

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