

Issues and options of sustainable management of Himalayan medicinal herbs

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Introduction

Nepal hosts a wide range of NTFPs and bio-diversity including over 700 species of medicinal herbs. NTFPs are an important part of the Nepalese economy, both locally as well as nationally. Recent studies indicate that several commercially valuable species are being over used and degraded (Edward 1996; Malla et al. 1995; Hertog 1995; Karki 1996; Sharma, 1996) due to higher demand as raw materials for herbal industries in India and other countries. As a result of pre-mature harvesting, over-exploitation and haphazard collection of NTFPs, the productive potential of the whole forest ecosystem is undermined. The damage is particularly serious in terms of pressure on the few species identified for trade, as well as pre-mature harvesting, physical damage, and haphazard collection.

This indicates a need to assess the reasons behind unsustainable practices, and identify options for sustainable management. Based on the recently collected field data from the western Himalayan region (Humla and Dolpa districts), the paper analyzes dynamics of unsustainable harvesting and management practices of NTFPs, with particular reference to Jatamansi (*Nardostachys grandiflora*), Kutki (*Picmrhiza scrophulariiflora*) and Sugandhawal (*Valeriana jatainansi*). Key variables within institutional, economic, natural/physical, and policy aspects are considered for analysis. Finally, potential actions that can be taken to improve harvesting practices are also suggested.

Sustainable management and harvesting issues

Forest fire and grazing practices

Intentional, repetitive and frequent forest fire is a common phenomenon in the Himalayan region of Nepal. Local people resort to these practice to improve the quality of new regeneration of grasses and to facilitate easier collection of wild mushrooms and *Julainansi*. There are even cases of rewards in terms of cash or kind such as goat or cow to herders and other people who set fire in the forest and pasture. This is particularly serious in Dolpa district.

Poorly developed institutions

In district and grass-root levels, the concept of institutional development is more a rhetoric than a reality. NTFP collectors work individually and there is no organized collective action among them. Though there are FUGs in some places, they hardly engage in mutual coordination and cooperation to deal with the opportunities of economy of scale and the business relationship with traders. It was noticed that in Dolpa and Humla, that DFOs and NGOs do not properly follow the DOF Guidelines while forming FUG. Forest operational plans of FUG'S are prepared by forestry staff and facilitators with little involvement of the communities, and they are merely concerned with fulfilling the target of the respective offices. Decisions are dominated by the views of community elites, political leaders, and forestry staff, while the concerns of the poor and marginalized groups remain largely unheard.

There is increasingly low level of trust of FUG households on FUGC members, as the latter are found to misuse the communal funds. Similarly, there is a lack of trust between communities and DFOs. and communities feel that DFO's response to them is inconsistent in relation to interpreting legal provisions of forest management and marketing of forest products. Similarly, there is still limited trust between local people and NGOs, whom people consider as temporary

entity and are often not adequately transparent in terms of goals, organizational procedures and financial aspects.

Exploitation

Generally NTFPs collectors are poor farmers. They hardly have any alternative occupation to earn cash income. They have no opportunities and access to the financial institution to get loan and subsidies when needed. To meet the critical shortages of cash during the peak famine period, they are compelled to take advance money from local NTFP traders, who are the only accessible credit source to them. In the dealing, traders bargain for sale of NTFPs to them and sometimes in the pre-set prices, which are apparently lower than the real market prices. These traders, who are the only source of information of market situation as well as government rules and regulations, ensure that they would receive their loan and advances back in terms of NTFPs. They usually have upper hand in the dealing with the local collectors. Through this, they exercise control on the timing and quantity of harvesting as well as the amount of benefits that go actually to the collectors.

Agricultural works coincide with NTFP collection season

Appropriate collection season of *Kutki*, *Jatamansi* and *Sugandhawal* coincides with the time of harvesting of various crops such as paddy, millet, *chino* (special rice of higher altitude), potato, fruits, and beans. In addition, NTFP collection season also overlaps with the time at which villagers are busy drying of various vegetables for winter snowfall season, and preparing land for sowing of wheat and barley. This is also the season of making *Pulia* (dried grass stored as a heap for the winter season) and move down the livestock from the pastureland. As a result, collectors are under tremendous time pressure during NTFPs collection seasons, and this force them to get engaged in pre-mature harvesting, and/or over harvesting in the accessible areas.

Bad weather conditions

Collectors are very sensitive to the weather conditions during NTFPs collection, and this is particularly true given the highly unpredictable nature of weather in the Himalayas. Rain and snowfall make herbs collection impossible. Cloudy days also create problems to collect the herbs due to poor visibility of tiny herbs as well as the extreme cold. Therefore collectors are forced to collect as much as and as quickly as possible in the few sunny days during the collection season.

Difficult land terrain

Almost all of the important NTFPs are found in the areas that are sloppy, undulating, rough and fragile, where collectors find it difficult to walk and harvest the products. When they reach a particular site, they want to collect as much as possible, which normally leads to over-harvesting.

Accommodation and food stress

Average collection of *Kutki*, *Jatamansi* and *Sugandhawal* rhizomes per day is 5-10 kg. Generally two to seven days are required to collect a single head-load of these NTFPs. In addition, collectors spend approximately two to five days just in traveling to and from the collection site. This requires collectors to carry out all the required accessories such as foodstuff, and other logistic support materials. Again due to limited resources to invest in such items, they are forced to collect as rapidly as possibly, without considering the maturity, growing stock and quality of species and products.

Team pressure

Collectors form small groups during harvesting especially in higher altitude and more remote locations where *Jatamansi* and/or *Kutki* are normally found. Forming groups allow them to save themselves from wild animals (such as Himalayan bear), collect (to do Rejo) and transport higher quantities of NTFPs, and make/improve foot trails and temporary bridges wherever required. When they are in the field, everyone feels a psychological pressure to collect as quickly as

possible so that s/he is not left out from the group. Under these situations, collectors tend to ignore concerns for resource sustainability.

Lack of communal ownership of the forest

Although the local communities depend on large tracts of NTFP rich pastures and forest, only small areas (average size in Humla is 328 ha. and Dolpa is 108 ha), where the NTFPs are either absent or only sparsely distributed, are handed over to FUGs as community forests. The large tracts of *de jure* NTFP rich national forests are virtually open access, where there is no community institution to mediate the harvesting practices.

Inadequate support from DFO and DOC

In the two districts studied, DFOs lack even the basic resource information as there is no any monitoring system for this. In both the districts, there are no NTFP management programs, except a few activities related to training and nursery establishment at the district level. District Development Committees (DDCs) have not yet recognized the potential of NTFP sector.

Sustainable management options and strategies

Following strategies are suggested to improve sustainable management of NTFPs in a way that enhances livelihoods of the forest dependent poor people:

- Improve policy to facilitate speedy hand over of even the larger areas of forest and pasture to local user groups
- Identify and cultivate potential tradable species to reduce the growing pressure of collection and trade of Kutki, Jatamansi and Sugandhawa
- Conduct participatory scientific researches to integrate indigenous as well as scientific knowledge regarding life cycle, ecological requirements, and regeneration, and uses
- Establish and strengthen collectors' cooperative so that the quantity of NTFPs collected will be high and consequently the bargaining power of the cooperative will be increased
- Develop monitoring systems at both DFO and FUG levels. Monitoring during and after harvesting should be done carefully by FUGs or collector's association, as well as by DFO and facilitating NGOs.

References

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