

Management of Non-Timber Forest Products

Conflicts Between Policy and Local People in Valuing Non-timber Forest Products: Perspectives from Nepal

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Abstract

The paper presents an historical account of policy in Nepal regarding non-timber forest product management, and then analyzes the policy in terms of national and local perspectives on the values of these products. It is demonstrated that the conflict between policy-makers and local people has resulted in degradation of forest resources, particularly non-timber forest products. Based upon case studies, it is shown that although the valuation gap is narrowing with the implementation of participatory forestry, local perspectives have not been adequately accommodated by state policies. Finally, it is suggested that policy guidelines be based upon local perspectives in order to realize the potential contribution of non-timber forest products to sustainable forest management and the national economy.

Key words: Policy, conflict NTFPs degradation, values, perspectives

INTRODUCTION

The role of Non-Timber Forest Products (NTFPs¹) is growing globally (Grimes et al. 19^o4; Perez and Arnold 1996; Peters et al. 1989; Wickens 1991). However, in most developing countries, central policy still categorizes NTFPs as "minor" forest products, resulting in less emphasis upon these products than upon timber within forest management programs and policies. Yet NTFPs are frequently the primary motivating factors for local participation in forest management. This disparity between local importance and policy emphasis underscores contrasting valuation of NTFPs between policy makers and local people. The governments have undervalued forest, or focused only on timber, and this has led to clearance or degradation of forests.

NTFPs are seen to be important in three crucial aspects (Arnold and Perez 1996): a) sustainable use of forests, b) the livelihood systems of very large numbers of people, and c) meeting commercial demands. Theoretically, the above three issues are important for any government, and first two should be more important; the practice, however, is contrary. The third has always been the major concern of many governments in developing countries (Falconer 1990). Most of the world's forest is under direct control of governments, and the rest is also heavily influenced by government policy (Repetto 1988) and so government's value judgment is crucial for setting management priorities.

¹ We have put forward following definitions for simplicity and clarity in the present study: NTFPs: All plant products derived from the forest except timber and fuelwood; and value: The importance assigned to a product as reflected in legislation, policy statements and government programs, or in its use as explained by local people.

The paper provides an historical account of policy in Nepal regarding NTFPs management, showing the government's persistent interests on commercial use of forest products. It then analyzes how national and local perspectives on the values of these products differ, resulting in the degradation of forests. Historical account of forestry policies, with a focus on NTFP is presented in four phases: issue specific (1775-1950), externally influenced (1950-77), internally developed (1977-88), and comprehensive (1988 onwards). Using evidences from Dang district in

western Nepal, specific cases of conflicts between local people and the government are identified. Looking into the narrowing gaps due to participatory forestry, further scope for policy development that recognizes the local values of NTFPs are then suggested.

GOVERNMENT'S CONTINUING COMMERCIAL INTERESTS

Early forestry codes

Two early codes, which influenced the later codes, were the regulations of King Mahendra Malla (1560-74) in Kathmandu valley, and the code promulgated by King Ram Shah (1606-33) in Gorkha (a district in west Nepal). The first stated, "For lamps, torches and wicks, go to the forests and use devadaru (pine wood)". The latter, Ram Shah, emphasized the production of forest products for subsistence need, maintaining pastureland, and developing trees along paths and water sources. Neither of these codes reflected a monetary interest of the government in NTFPs.

Later, the commercial interests of the government started along with the unification of the larger kingdom of Nepal. The founder king of unified Nepal, Prithwinarayan Shah (1742-1775), expressed in one of his directives, "Send our herbs to foreign countries and bring back money" (Stiller, 1968). Clearly, NTFPs were already a part of trade in the early eighteenth century, and became the concern of the central authority. This is how interest in NTFPs was incorporated into forest policy in Nepal from the beginning of unification. This notion found its way into later policies in which NTFPs were seen as export goods.

Issue-specific forest policy (1775-1950)

This period is the continuation of policy making without any significant external influence. Western colonial forestry was being implemented evolving in British India during this period, but this implementation could not influence significantly on the Nepali forest management policy (Tucker, 1987), except logging of Tarai sal forest.

Central authorities were aware of and regulated the value of forests as sources of commercial NTFPs to be used for government purposes. Use of timber and non-timber forest products was regulated in order to maintain government access to needed commodities. A chapter "On tree felling" was incorporated in the first civil code 1854 of Nepal dealing with all the forestry matters. Forest policies on NTFPs were guided by sporadic orders from the central authority prior to and after this code.

Examples of government orders that asked for the supply of forest products for government purposes include:

- "Each household shall supply one load of babiyo (*Elaliopsis binnata*) consisting of twenty dhamis (2.4 kg) on jhara (labor without pay) basis for the construction of the Jagannath temple in Kathmandu" (Royal order dated August 1796, RRS 1986: 27-28).
- "Supply 81 loads of cane for the construction of a jholanga (suspension bridge) over the Daraundi river in Gorkha" (Royal order dated April 1803, RRS 1988: 149).

- "Timber and bamboo from that forest were allowed to be cut only for the construction of embankments on dams and irrigation channels meant for irrigating jagir lands (land allocated as salary) of the army, as well as of fords on streams and rivers" (Royal order dated December 1832, RRS 1982: 152).

Likewise, examples of orders that encouraged trade of NTFPs in this period include:

- "A one-year ijara (contract) was granted for the export of wax, honey, pipalamul, (*Pipala imirglicingu*), and *Terminalia chebulu* (fruit) from that forest for a sum of Rs (Rupees) 363 (current exchange rate 1 US\$ - Rs 69)" (Contract dated January 1886, RRS 1982: 111).
- "Tax for (sal) leaves 12 and 10 paisa (100 paisa = Rs 1) per man-load in inside and outside periphery of Kathmandu valley respectively, and 1 paisa per bundle for all areas" (Notification issued on December 1910, RRS 1981: 96-98).

There was also a tax system for subsistence use:

- "Necessary timber and other forest products such as bamboo and sabai grass (*babiyo*, *Elaliopsis binnata*) shall be supplied on payment of the prescribed fees to any person who wants to build a brick house with tile roof, or a bridge, or to manufacture agricultural implements. Provided that such person shall be allotted only the actual quantity, and not allowed to sell the excess if any" (Prime Minister's order dated December 1866, RRS 1983: 17).

These evidences suggest that there was an attention of the government in regulating the forest products that were considered important.

Externally influenced forest policy (1950-77)

External forces influenced Nepal's forest policy in the early 1950s. An attempt was made to create an appropriate infrastructure for scientific management of forests worldwide (FAO 1950). Advisors were involved to draft science-based management policies (Robbe 1954; Willan 1967). Nepal enacted the Private Forest Nationalization Act 1957 in order to consolidate forest ownership under the government. As there was little experience in forest management in Nepal and all Nepali forestry professionals were trained in India, policy from this period is greatly influenced by the laws, bylaws, and programs of Indian Forestry.

Later, the Forest Act 1961 was enacted as the basis for sustained yield management, which was then the guiding principle of forest management. The Act listed forest products beside timber, but confined only those forest products that were already in the market. These products were termed as 'minor forest product'. The policy said nothing about NTFPs that were not marketed, and thus neglected products other than revenue-making products. No NTFPs development activities were initiated, underscoring the lack of central government interest in the majority of NTFPs available in the country.

Internally developed forest policy (1977-88)

While working within the existing forest policy, Nepali foresters gained broader exposure to forest management. This wider experience, coupled with the concerns shown by many sectors of the country, led to a revised forest policy based upon national facts and figures (HMG, 1977). The main changes from the earlier policies were attempts to realize people's participation in forest management, and clearly articulated long-term goals. Implementation was through amendments to forest acts, and the introduction of forest bylaws for community forestry.

HMG (1977) categorized forest products as timber, fuelwood, minor forest products, and services such as aesthetics, pasture, and water conservation. Minor forest product included sabai grass/babio, resin, wax, honey, fibre, cotton, and medicinal plants, but included no program for the management of NTFP resources. HMG did start processing of some products by creating the forest products development board, royal drugs research laboratory, rosin and turpentine industry, and herbal processing company. However, the majority of minor forest products were dealt with solely through issuing permits to traders. Nevertheless the policy still favored timber production at the cost of some NTFPs.

Thus the forest policy developed in national context reinforced the existing revenue-generating interest in NTFPs, neglecting NTFPs that are valuable in the local context.

Comprehensive forest policy (1988 onwards)

HMG (1988) developed a forestry sector master plan, and identified six main and six supporting programs for the development of the forestry sector in Nepal. A program consisting of medicinal and aromatic plants, and other minor forest products - lokta {Daphne }, pine resin, sal seed, katha and sabai grass, and bamboos and canes - is one of the six main programs. The master plan prescribed some plans for the development of these species, all more or less industry-oriented products. As seen by central government, NTFPs are still based upon revenue-earning capacity rather than the needs of local people.

In subsequent actions, as part of the infrastructure development for implementing the forestry sector master plan, HMG (1993) brought into effect new forest laws and bylaws. The new legislation categorized NTFPs into eight classes: roots (43 species), timber bark (20 species), leaves (31 species), flower and fluff (24 species), fruit and seeds (65 species), plants (12 species), gum resin and lac (10 species), and herbs (29 species). Thus the policy identified 234 NTFPs in the country, but no programs for their management were prescribed except issuing permits for exploitation.

In summary, the historical overview reveals that efforts toward NTFPs management have been confined to realizing revenue through fixing royalties on identified products. When government is aware of a NTFP it taxes that product. It is clear that whenever there is no tax, government is not aware of the product. The value assigned at the policy level can be traced by looking at the tax on that particular product. NTFPs valuable in the subsistence economy have not been of central government concern.

CONFLICTS IN VALUES

While the subsistence value of NTFPs has long been recognized, these resources did not feature in forest management planning, and there has always been competition between national needs and the local use of forest resources in Nepal and elsewhere (Falconer 1990; Bahuguna et al. 1994). Competing national and local needs led to conflicts in forest management. This section focuses on the processes/acts where the conflicts are reflected, in valuation and management efforts, and briefly outlines the results of these conflicts

Most of Nepal's sectoral policies are founded on economic grounds; forest policy is no exception. The valuation of any forest product is based upon the maximum benefit to the central authority. Valuations are sometimes not only different but also contradictory. Values of NTFPs are reflected in their identification, categorization, regulation, and management efforts.

Although people remain aware of the utility of these species, supply is constrained by lack of management for these products. Government issued permits for those products that generated

revenue, or that have markets, but no rights and responsibility were assigned to people for management.

As embodied in forest regulation, government has identified so far 234 NTFPs in the country, whereas locals from only a small area under a single forest type identified 436 NTFPs. For government, only 234 are valuable whereas all 436 are valuable for the local people. Out of the 234 listed in forest legislation, only a few are available in the studied forests. The studied forests therefore have little importance from the government's view, so far as NTFP management is concerned.

Information collected from two forest user groups managed forests shows that 436 products in 24 use categories were familiar to the local forest users from sal forest, whereas government policy sees only a few products from such a forest. Even in the products recognized by the government, people may have seen greater uses than the one seen by government. For the users, many species have multiple uses.

The gap between government's and local users' identification of NTFPs is not based on the number of availability of species, but due to differences in perceived utility. Government's identification process starts from the market demand, whereas local people's identification begins with subsistence use. This fundamental difference underlies the gap between central government policy and local users' valuation of NTFPs.

Most of the NTFPs that are in the government's list are medicinal plants and aromatic plants, and other products that have markets inside and outside the country, or have industrial interest. Unless the product has a market, government does not see it as product, and so only the NTFPs that generate revenue are taken as products. The NTFPs listed by the people are for their daily use such as fodder, rope, utensils, small timber, etc. Although local people are interested in income-generating NTFPs, they do not contribute to their subsistence to the same extent as the subsistence products do. In this context, one of the expressions by local users is worth considering:

"We used to rely on forest for our medicine, and this practice has been reduced with the availability of some medicine in market, although very small portion could pay for this. It is however, not possible to look for any alternatives beyond forest for the fodder for our goats and cattle, and many other such products. "

MANAGEMENT EFFORTS

Management efforts for NTFPs in different times have shown that government always emphasized on commercially valuable products and managed to control revenue coming from them (HMG 1977, 1988 and 1993; Edwards 1996; Baral 1998). These efforts include listing marketable forest products, fixing royalties, banning on collection and or export, and assigning prices.

The management focuses on harvesting and consolidating revenue. Government research and development of NTFPs management is still lacking, except in-farm research of a few revenue earning species. No efforts are made to produce NTFPs from forests, while users of Rapti and Basanta-hariyali community forests are concentrating their efforts on the production side of the products. They have included all the products, which they noticed useful, in their management plan.

OUTCOME OF THE CONFLICT

Evolving government policy on NTFPs indicates that the government initiates a levy whenever it is aware of the product's use. Once the tax is levied, no provision is made for subsistence use, and so all unpaid local utilization is extralegal. People's needs for NTFPs cannot be met easily by other products, so they rely upon the illegal collection. Furthermore, once people became conscious of government's intention to tax selected NTFPs, they lost affection with those forest products. This created the situation of haphazard collection from areas easy access.

People have noted that government is expanding its control over NTFPs through changing forest legislation, and each product is becoming the government's product. Unlisted products remain accessible to everyone, but people's attention to supply and health of these species has been eroded with the evolving legislation. Eventually, most of the locally important species are in short supply (HMG 1988).

Local elderly people expressed:

"Government 'a contractor used to employ labor to collect ban-tand (Dioscorea spp), kurilo (Asparagus spp.), tendii (Diospyros melanoxylon), pipla (Piper longum), amia (Embllica officianalis), etc. They used to collect everything from young to matured, as they were not sure to have their contract valid/or the following year. Again in the following year the same or the new contractor did the same: slowly the plant disappeared. For those products listed in the regulation, they became the government products, and no responsibility from the local people "

For the products to which government seems indifferent, locals expressed the reason for degradation as:

"The products other than listed in the regulation are free to collect, if they are other than wood. So to collect the small wood and timber, people used to collect either in the early morning or late evening, and spent as short a time in the forest as possible. So wood has to be collected from the nearest source, irrespective of maturity status. A similar process was adopted to collect sal foliage. Although no restriction was introduced for other medicinal and aromatic plants, such practice affected the whole ecology of the forests. Furthermore, the system of permit issuing in their nearby forest turned the local people away from loving the forests. Uncontrolled grazing and forest fire and extraction activities damaged the regenerative capacity of many products, and resulted in degraded forest with scattered sal trees and loss of many species and products. "

EMERGING INITIATIVES

Only recently, community forestry policy entrusted forests to local users groups, and a feeling of ownership arose among the local people. They initiated management through preparation 'of an operational plan with forestry technicians' support.

Users have indicated their concern for the development of NTFPs, through appropriate prescriptions in the management plan. Accordingly, activities such as grazing, burning, lopping, and grass collection (regulated by compartment) are totally controlled for protecting NTFPs. No other management and development measures are prescribed, due to limitation of such knowledge in forestry personnel. However, local users perceive some skill and knowledge among themselves, which needs to be explored and developed. Implementation of community forestry has been observed as an opportunity to use and institutionalize their experience in managing NTFPs in their forests.

CONCLUSION

It is clear that there are two sets of NTFPs, one that is crucial to the subsistence for community only and the other contributing to central treasury too. NTFPs do not contribute to the central treasury to the same extent that timber does, but contribute through generating employment at local level, as well as creating multiplier effects down the value chain, in different times and spaces. The problem lies not in the actual value of these resources, but in the failure of public policy to recognize it.

So there is a basic conflict that determines the allocation of resources for NTFPs management, and that government will not be able to manage forests for the entire range of forest products useful to local people. If solely left to the government's effort, the forests may degrade further. The demands and conflicts in NTFP management have shown that scientific management of forests cannot always be carried out without the cooperation of local people (Bahuguna *et al.* 1994), who believe in increasing production.

Although local participation is felt necessary for the sustainable management of resources, efforts have been still focused on involving people in the government's program, i.e., in the value fixed by the government not on the value seen by local people. The need remains to accept the reality that NTFP management systems that sustain and develop the value of forests for people living near them can help to assure people's interest in the forest's long-term management (Falconer 1996). The best way to resolve valuation and management conflicts will be management decisions by local people through local organizations (Browder 1992; Edwards and Maharjan 1996; Lama *et al.* 1996; Mallae *et al.* 1996).

Ecological management of NTFPs is site-specific and requires concentrated and multi-sectoral attention. Silvicultural systems for enhancing the growth of NTFPs such as wild fruits, edible nuts, small-wood, rope-making climbers, mushrooms, gums, latex, etc., which can be harvested non-destructively and in combination with timber, have received much less attention than timber production (FAO, 1995). Due to the lack of silvicultural knowledge, potential improvements are restricted to the passive protection of forests. However, in numerous instances indigenous or other local communities have developed their own form of "silviculture" for managing their resources for products other than timber. Such management has not been considered in the national forest policy and has been little studied.

Based upon case studies, it is shown that the valuation gap between government and local users is narrowing with the implementation of participatory forestry in Nepal. Continuing further in this line, it is suggested that policy guidelines be based upon local perspectives in order to realize the potential contribution of non-timber forest products to sustainable forest management. Bridging the above stated valuation gap will bring policy in line with the practical aspects of forest management, and enhance efforts to implement sustainable forest management. There is a way to achieve both the maintenance of biodiversity and improvement of the lot of the poor.

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