

Challenges and Opportunities in Equitable Distribution of NTFP among the Usufructs of Nepal

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Abstract

Non-timber forest products (NTFPs) are plants or plant parts that have perceived economic or consumption value sufficient to encourage their collection and removal from the forest. The main objective of this study is to identify the challenges and opportunity in equitable distribution of NTFPs among the usufructs. The study was conducted among the 446 usufructs of Dolpa, Salyan and Banke of Western Nepal. The study had adopted the simple random sampling technique to select the respondent from the study areas. Mixed method approach was applied for data collection. The findings show that there were some challenges due to inadequate knowledge and incomplete information on products, markets and prices on the part of collectors/producers. 54.9 percent of them said lack of the market system of providing price of NTFPs was the key challenges/barriers for the equitable distribution of usufructs followed by dominance of middleman/traders (52.2%), lack of accessibility of big market (45.3%), lack of awareness of price of NTFPs (12.4%) and lack of accessibility to MPIS (6.2%). Though, there were more opportunities to promote the NTFP. Demand of NTFPs mainly comes for three major use categories: 1. Pharmaceutical Industry & Research, 2. Health Care, and 3. Consumer Market. The Government of Nepal should provide the technical skills through training and orientation to usufructs about the proper cultivation and harvesting of NTFP and knowledge on use of MPIS which can directly contribute in the sustainable management of NTFP.

Keywords: Challenges, Distribution, Equitable, Market Price Information System (MPIS), Non-timber Forest Product (NTFP), Nepal, Opportunity

Introduction

Nepal is a naturally beautiful and rich in natural resources. Forest and forest products are the main source of income and livelihood for the rural people. Non-timber forest products (NTFPs) are plants or plant parts that have perceived economic or consumption value sufficient to encourage their collection and removal from the forest. These include plants and plant materials used for food, fuel, storage and fodder, medicine, cottage and wrapping materials, biochemical, as well as animals, birds, reptiles and fishes, for food and feather (Adepoju & Salau, 2007). NTFPs may be gathered in the wild or from trees outside forests or produced in forest plantations and agro forestry schemes (Carr, Hartl, Lubbock, Mwanundu, & Firmian, 2008).

Farmers often have limited outlets for their produce and are often bound by traditional trading relationships, which may include an element of credit provision by the trader. Opportunities for most farmers to take advantage of spatial arbitrage possibilities are therefore restricted. Such opportunities are further hindered by the small quantities produced by most (Shepherd, 1997). The agriculture sector accounts for between 30% and 60% of the gross domestic product (GDP) of many mountain regions in South Asia and employs up to 80% of the workforce (ICIMOD, 2011). Governments are now finding it difficult to meet the most basic food and nutritional needs of their populations, which remain vulnerable to food insecurity. The problem is more serious in mountain areas because of remoteness, inaccessibility, the fragile environment, the limited area of arable land and high transportation costs (ICIMOD, 2008). In order to generate competitiveness in the sector, the role of facilitators from the government should be to promote an enabling environment for resource management and commercialization; the downstream actors should strengthen the vertical dimensions of the VC by collaborating with upstream suppliers. Horizontal co-ordination at the upstream level by collectors and producers is important to improve the bargaining power of small producers with marketable quantities backed by quality-assurance systems (Choudhary et al., 2014). The mainstreaming of NTFPs into development debates will not be easy. As mentioned previously, there is a severe lack of awareness and, in most countries insufficient information, with which to lobby or convince development planners and agencies.

Different NTFPs are currently gaining more and more importance in the market, which may increase income opportunities for forest fringe tribal people in the future. As we know there are some physical barriers for agricultural production in forest areas, a systematic way of harvesting of NTFPs and introduction of modern technologies may bring more improvement in the uses of NTFPs and thus NTFPs may become potential sources of income for the forest fringe dwellers. At the same time, it will be possible to conserve the natural forest and

environment. So there is need to identify the challenges and opportunities experienced by the farmers in equitable distribution of usufructs.

Materials & Method

This study is based on cross-sectional design. Mixed method approach was applied for data collection. Both quantitative and qualitative surveys were designed to collect the data/information required to answer the study objectives. The questionnaire was designed to identify key challenges and barriers in equitable distribution of usufruct. Three representative districts, Dolpa, Salyan and Banke of Western Nepal were chosen for this specific research. These three districts are situated in the different eco-regions (mountain, hill and tarai) and with varied socio-cultural aspects. The study had adopted the simple random sampling technique to select the respondent from the study areas. The final sample size for questionnaire survey was 466. All data was digitized and entered into statistical software. The data was imported in SPSS for labeling and analysis.

Results & Discussion

The analysis of quantitative and qualitative data related to the knowledge of usufructs about the Market Price Information System (MPIS), current practice and its effectiveness on sustainable management of NTFPs in long showed not satisfactory result. Very few people had access on MPIS and fixing the price of NTFPs from the mutual negotiation between seller and buyers. There was no any standard to fix the price of NTFP in current practice. These challenges were identified as well as lack of access of market information and other geographical setting, educational level of people also affected in accessing of MPIS of NTFPs.

1. Key challenges faced by usufructs

Table No. 1 illustrates the key challenges/barriers faced by the respondents for the equitable distribution of usufructs. Among the respondents 54.9 percent of them said lack of the market system of providing price of NTFPs was the key challenges/barriers for the equitable distribution of usufructs followed by dominance of middleman/traders (52.2%), lack of accessibility of big market (45.3%), lack of awareness of price of NTFPs (12.4%) and lack of accessibility to MPIS (6.2%). Where in case of Banke 45 percent respondents and 86.7 percent of retailers reported lack of awareness of the price of NTFPs as key challenges for the equitable distribution of usufructs while in Salyan 73.0 percent of the respondents feels dominance of middleman/traders as the key challenges.

Table 1: Key challenges faced by usufructs

| Key challenges faced by usufructs | Total | | District | | | | | | Type of respondent | | | | Gender | | | |
|---|-------|------|----------|------|--------|------|-------|-------|--------------------|------|----------|------|--------|------|------|------|
| | | | Banke | | Salyan | | Dolpa | | CFUG Member | | Retailer | | Female | | Male | |
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Lack of market system of providing price of NTFPs | 258 | 55.4 | 113 | 62.8 | 134 | 49.6 | 11 | 68.8 | 245 | 54.4 | 13 | 81.3 | 92 | 55.8 | 166 | 55.1 |
| Dominance of middleman/traders | 240 | 51.5 | 38 | 21.1 | 197 | 73.0 | 5 | 31.3 | 234 | 52.0 | 6 | 37.5 | 65 | 39.4 | 175 | 58.1 |
| Lack of accessibility of big markets | 209 | 44.8 | 53 | 29.4 | 151 | 55.9 | 5 | 31.3 | 200 | 44.4 | 9 | 56.3 | 67 | 40.6 | 142 | 47.2 |
| Lack of awareness of price of NTFPs | 175 | 37.6 | 81 | 45.0 | 78 | 28.9 | 16 | 100.0 | 161 | 35.8 | 14 | 87.5 | 59 | 35.8 | 116 | 38.5 |
| Lack of proper knowledge of NTFPs | 62 | 13.3 | 20 | 11.1 | 36 | 13.3 | 6 | 37.5 | 59 | 13.1 | 3 | 18.8 | 22 | 13.3 | 40 | 13.3 |
| Lack of accessibility to MPIS | 30 | 6.4 | 13 | 7.2 | 15 | 5.6 | 2 | 12.5 | 29 | 6.4 | 1 | 6.3 | 10 | 6.1 | 20 | 6.6 |
| Scarcity of water | 5 | 1.1 | | | | | 5 | 31.3 | 5 | 1.1 | | | 3 | 1.8 | 2 | .7 |
| Low market price | 4 | .9 | | | | | 4 | 25.0 | 4 | .9 | | | 1 | .6 | 3 | 1.0 |
| Machine is not in condition | 1 | .2 | | | | | 1 | 6.3 | 1 | .2 | | | 1 | .6 | | |

Source: Field Survey, 2017

In the experience of Government Officers (Assistant Botanist of Banke, District Forest Officer of Dolpa and Salyan), Nepalese usufructs were doing the farming of NTFP on the basis of their traditional knowledge. They had no technical knowledge and also they are not doing the professional farming. Government officers feared that if such practice would be continued then after some years later, there would be high chance to loss the existing medicinal plants. So, concerned authorities should take immediate action to provide the proper knowledge of cultivation and harvesting of NTFP. Government officer shared that usufructs collect the NTFP without proper caring of plant and sheds so there are high chances of loss the plant for next year. Lack of proper knowledge is the big challenge of sustainable management of NTFPs.

2. Way to manage the challenges of proper management of NTFPs

Table No. 2 illustrate the measures to manage and mitigate the key challenges that were faced for the equitable distribution of usufructs. 81.8% of the respondents feel these challenges can be managed/mitigate through “awareness about price of NTFPs” followed by “increase the accessibility of market (62.7%) and “removed middleman/traders” (25.8%). The proportion was found universal in both the districts and among the CFUGs members and retailers.

3. Need of improvement in MPIS for the benefit sharing of NTFPs among Usufructs

Table No. 3 illustrate the proportion of the respondents who reported to make improvements in MPIS for the equitable distribution of usufructs. 99.3% of the respondents said there should be made improvements in MPIS for the equitable distribution of usufructs.

When asked what kind of improvements should be done in MPIS for equitable distribution of usufructs 67.6% of the respondents said there should be proper active MPIS followed by “frequent update information” 45.2%, “provide sufficient information” 40.7% and “easy accessible” 15.7%. In case of retailer “MPIS”, provide sufficient information” and “easy accessible” have been seen equally important with 93.3 percent each and 86.7 percent of the respondents said “frequent update information”.

4. Types of improvements in MPIS for the sustainable management of NTFPs

The study has discussed on the improvement factors in information system so that it will be helpful in equitable distribution of usufructs. The data presented in the Table No. 4 shows that in total 68% said that there is need to provide the list of market price in MPIS so that all people can have information of goods. Similarly, 47% said the

need of frequent update of information and 41.3% said that there is need to provide the sufficient information and 16% said that MPIS should be easily accessible for all.

All users and producers are not equally educated and have no equal access on the information system. The remote areas have no facility of communication, internet and transportation also so they are back from the information. Most of the rural people use the informal channel like friends and neighbor to collect the information of price and market of NTFPs.

Collectors, processors and traders face problems in finding favorable markets due to price factors, quality and quantity considerations. Local and regional price fluctuations as well as the lack of current market and price information affect the income of the actual local collector who is dependent on the middleman or village trader. Financial and logistic constraints make it difficult for local producers and collectors to interact more closely with prospective clients. The gaps between the producers/collectors and traders or buyers need to be minimized as these are, at present, very wide and often inequitable.

The concept of MPIS of NTFP is still not properly institutionalized in Nepal which is one of the major challenges in trading NTFPs both at domestic and international level. From the discussion with usufructs and other stakeholders, some of the following challenges were shared and observed in the real setting of study areas also:

- Inadequate knowledge and incomplete information on products, markets and prices on the part of collectors/producers
- Difficult to access appropriate markets and market information
- No proper recognition of environmentally and commercially sound NTFPs
- Inability to visit traders/buyers or interact closely with them
- Defective policy and regulatory environment for trading NTFPs, which is hindering the business
- Lack of standardization and consistency in quality for international marketing
- Astringent phyto-sanitary regulations such as requirement of microbiological test, pesticides and heavy metal test by international markets
- Political Instability
- MPIS dissemination
- Uneven distribution of benefits

Besides its challenges, there is better opportunity of promotion of NTFPs having with the institutional management of MPIS. Commercialization of NTFPs enables rural dwellers and poor urban households to diversify their source of incomes, which

contributes to their food security and reduces their level of poverty. It also increases the economic value of NTFPs thereby increasing the awareness and incentives for local communities to conserve many forest products. Recent market trend shows that the use of green products especially NTFP related health products, flavors and fragrances is receiving increasing attention worldwide.

From the discussion with usufructs, followings opportunities of managing and marketing NTFPs both at domestic and international level are shared by the respondent.

Recent market trend shows that the use of green products such as NTFPs especially health products, flavors and fragrances is receiving increasing attention worldwide. Scientists, researchers and multinational pharmaceutical companies are looking for active substances in the plants for the cure of various diseases, where modern synthetic medicines are proved to be less effective.

Demand of NTFPs mainly comes for three major use categories:

1. Pharmaceutical Industry & Research

- Use of plant products in dried form in the formulation of Ayurvedic medicines
- Use of plant products in the form of extracts, alkaloids, glycosides in modern medicines
- Phytochemical screening of plants for the isolation of new drugs for various diseases. Examples of new drugs isolated from such screenings include Taxol from *Taxus baccata*, Valpotriates from *Valeriana Spp*, Vincristin from *Vinca rosea*

2. Health Care

- Ayurveda, Siddha & Unani medicines are based mainly on plants, widely used in India, Bangladesh, Nepal, Pakistan & Srilanka
- Ayurveda alone has 8000 different medicines based on plants
- 80% of medicines used in Chinese traditional medicines are from high altitude NTFPs: medicinal and aromatic plants
- 25% of allopathic prescriptions are filled with plant and plant derived products

3. Consumer Market

- Natural & health food shops such as herbal teas, medicated drinks, tonics, etc.
- Cosmetics and perfumery industries- essential oils such as Jatamansi and Sugandhwal oils are used in this purpose
- Health care products such as tooth paste, hair oils and soaps: Amala, Bhringaraj, Lemongrass, Citronella and Zanthoxyllum
- Aromatherapy: Essential Oils such as Aretemisia, Jatamansi, Sunpati, Sugandhwal, Juniper and Zanthoxyllum etc.

- Cooking and flavoring: Mint, Rosemary, Lemongrass, Thyme, Basil, etc.
- Food additives: Juniper berry oil for blending alcoholic beverage, Chiraita for bitter taste in beverages, etc.
- Natural Dyes: such as Berberis and Manjitho
- Insecticide: such as Titepati and Neem

The above mentioned challenges in the marketing management of NTFPs could be managed with establishing and implementing MPIS system. Similarly, the above mentioned opportunities could also be harnessed at optimum level in benefitting Usufructs and sustaining the NTFP resource for the long run. Hence, the current increase in the worldwide consumption and use of 'green' products, especially drugs, flavors and fragrances of natural origin, has indeed amplified the scope of the use of indigenous flora and collection and trade of exotic species (NTFPs).

Table 2: Way to manage the challenges of proper management of NTFPs

| Way to manage the challenges of proper management of NTFPs | Total | | District | | | | | | Type of respondent | | | | Gender | | | |
|--|-------|-------|----------|-------|--------|-------|-------|-------|--------------------|-------|----------|-------|--------|-------|------|-------|
| | | | Banke | | Salyan | | Dolpa | | CFUG Member | | Retailer | | Female | | Male | |
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Awareness about price of NTFPs | 384 | 82.4 | 122 | 67.8 | 246 | 91.1 | 16 | 100.0 | 368 | 81.8 | 16 | 100.0 | 128 | 77.6 | 256 | 85.0 |
| Increase the accessibility of market | 291 | 62.4 | 111 | 61.7 | 171 | 63.3 | 9 | 56.3 | 277 | 61.6 | 14 | 87.5 | 96 | 58.2 | 195 | 64.8 |
| Remove middleman/traders | 125 | 26.8 | 24 | 13.3 | 92 | 34.1 | 9 | 56.3 | 114 | 25.3 | 11 | 68.8 | 39 | 23.6 | 86 | 28.6 |
| Others | 5 | 1.1 | | | | | 5 | 31.3 | 5 | 1.1 | | | 4 | 2.4 | 1 | .3 |
| Total | 466 | 100.0 | 180 | 100.0 | 270 | 100.0 | 16 | 100.0 | 450 | 100.0 | 16 | 100.0 | 165 | 100.0 | 301 | 100.0 |

Source: Field Survey, 2017

Table 3: Need of improvement in MPIS for the benefit sharing of NTFPs among Usufructs

| Need of improvement in MPIS for the benefit sharing of NTFPs among Usufructs | | District | | | Type of respondent | | Gender | | Total |
|--|---|----------|--------|--------|--------------------|----------|--------|--------|--------|
| | | Banke | Salyan | Dolpa | CFUG Member | Retailer | Female | Male | |
| Yes | N | 178 | 269 | 13 | 444 | 16 | 161 | 299 | 460 |
| | % | 98.9% | 99.6% | 92.9% | 99.1% | 100.0% | 97.6% | 100.0% | 99.1% |
| No | N | 2 | 1 | 1 | 4 | 0 | 4 | 0 | 4 |
| | % | 1.1% | .4% | 7.1% | .9% | 0.0% | 2.4% | 0.0% | .9% |
| Total | N | 180 | 270 | 14 | 448 | 16 | 165 | 299 | 464 |
| | % | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Source: Field Survey, 2017

Table 4: Types of improvements in MPIS for the sustainable management of NTFPs

| Types of improvements in MPIS for the sustainable management of NTFPs | Total | | District | | | | | | Type of respondent | | | | Gender | | | |
|---|-------|------|----------|------|--------|------|-------|-----|--------------------|------|----------|------|--------|------|------|------|
| | | | Banke | | Salyan | | Dolpa | | CFUG Member | | Retailer | | Female | | Male | |
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Provide list of market price | 34 | 68 | 16 | 91.6 | 13 | 51.9 | 12 | 80 | 29 | 67 | 15 | 93.8 | 12 | 75.8 | 17 | 63.8 |
| Frequently update information | 27 | 47 | 33 | 18.5 | 16 | 62.9 | 15 | 100 | 20 | 45.3 | 14 | 87.5 | 59 | 36.6 | 18 | 52.5 |
| Provide sufficient information | 11 | 41.3 | 87 | 48.9 | 95 | 35.3 | 960 | | 176 | 39.5 | 158 | 93.8 | 66 | 41.6 | 15 | 41.5 |
| Easily accessible | 74 | 16 | 33 | 18.5 | 37 | 13.8 | 426 | | 69 | 15.5 | 531 | 31.3 | 19 | 11.8 | 55 | 18.3 |

Source: Field Survey, 2017

Conclusion

On the basis of analysis of quantitative and qualitative data, it is found that there was no any standard to fix the price of NTFP in current practice. These challenges were identified as well as lack of access of market information and other geographical setting, educational level of people also affected in accessing of MPIS of NTFPs. Among the respondents 54.9 percent of them said lack of the market system of providing price of NTFPs was the key challenges/barriers for the equitable distribution of usufructs followed by dominance of middleman/traders (52.2%), lack of accessibility of big market (45.3%), lack of awareness of price of NTFPs (12.4%) and lack of accessibility to MPIS (6.2%). Besides that, there are many opportunities to promote the NTFP in Nepal and other countries. Recent market trend shows that the use of green products such as NTFPs especially health products, flavors and fragrances is receiving increasing attention worldwide. Scientists, researchers and multinational pharmaceutical companies are looking for active substances in the plants for the cure of various diseases, where modern synthetic

medicines are proved to be less effective. Demand of NTFPs mainly comes for three major use categories: 1. *Pharmaceutical Industry & Research*, 2. *Health Care*, and 3. *Consumer Market*. The Government of Nepal should provide the technical skills through training and orientation to usufructs about the proper cultivation and harvesting of NTFP and knowledge on use of MPIS which can directly contribute in the sustainable management of NTFP.

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