

## STUDY ON COLLECTION AND UTILISATION OF MINOR FOREST PRODUCES BY MOUNTAIN WOMEN

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### ABSTRACT

The study was conducted on 107 women villagers of four villages at Dhanaulti in Uttarakhand, India for qualitative and quantitative measurement of collection and utilisation of Minor Forest Produces (MFP) by women. Mountain women regularly collect fuelwood, fodder grass, leaves and vegetables, fruits and flowers, medicinal plants and branches from forest. The study reveals that 100% women collect fuelwood and fodder grass round the year except for three months of rain and snowfall. More than 70% women collect 400-600 kg of fuelwood per head annually. About 50% women collect same amount of fodder grass per head annually. 37.38% women collect seasonal leaves and vegetables like Lengra (*Diplazium* species), Hisar (*Rubus duthieanus*) etc. and 75.7% women collect fruits and flowers like Bhamor (*Cornus capitata*), Buransh (*Rhododendron*) etc. mainly for household consumption. 35% respondents collect more than 80 kg of branches per head annually. Less than 1% women collect medicinal herbs like Chirayta (*Swertia chirayita*), Satavar (*Asparagus recemosus*) and Daruhaldi (*Berberis aristata*). 43.92% of women lack knowledge of collection, processing and marketing of minor forest produces. This is the main reason for not being able to use MFPs commercially. The project conducted trainings on MFP processing and marketing to support income generation for mountain women.

**Key words:** Minor Forest Produces, Uttarakhand, Mountain women, Fuelwood, Rhododendron.

### Introduction

Mountain women regularly collect Minor Forest Produces (MFPs) like fuelwood, fodder grass, leaves and vegetables, fruits and flowers and medicinal plants from forest. In average, they spend about 2.5 hours daily for 9 months of the year (due to rain and snowfall) in collection and transportation of forest produces. Village women are the primary users of the forest resources, interacting directly with the forest biosphere for prolonged duration and on a daily basis for collection and sale of a diverse range of forest produces (Mukhopadhyay, 2004). MFPs or Non-Timber Forest Products (NTFPs) offer great promise for women producers in the informal economy. Resource-poor people, particularly women, find NTFP activities attractive because of the low technical and financial entry requirements, freely available resource base and instant cash in times of need. Gathering firewood, or 'head loading' as it is often called, for domestic use and as a source of income is the most widespread gender-based activity for poor women (Gera, 2002). NTFPs have a tremendous potential to create large scale employment opportunity thereby helping in reducing poverty and increasing empowerment of particularly

tribal and poor people of the poorest and backward districts of the country (Planning Commission, 2011).

It has been observed that women collectors often lack knowledge of proper method of collection, storing, packaging and minimal value addition of MFPs. This restricts them for not being able to use MFPs commercially or gives them lower returns and also disturbs the species richness. If the women collectors do not process NTFPs locally, the raw materials tend to yield low returns and offer little prospect for accumulation of the capital needed to escape poverty (Carr, 2008). The project aimed to eliminate (or reduce considerably) these handicaps through capacity building and knowledge sharing on storage, processing, value-addition and marketing of MFPs for higher income and better livelihood opportunities for mountain women. The study was conducted for baseline database generation on qualitative and quantitative measurement of collection and utilisation of MFPs by mountain women. This helped in planning of resources and knowledge required for capacity building and handholding for the mountain women.

The study was conducted at Dhanaulti Tehsil and the study area is located between 30°24' & 30°28' N and

Qualitative and quantitative measurement of collection and utilisation of Minor Forest Produces by mountain women of Dhanaulti, Uttarakhand for database generation and capacity building on processing and value-addition of MFPs.

78°10' & 78°18' E in Tehri Garhwal district of Uttarakhand. Dhanaulti lies on a ridge at an altitude of 2286 m. (amsl). Located in the midst of Government notified Reserve Forest, the major tree species found in the area are Deodar (*Cedrus deodhara*), Oak (*Quercus spp.*), Rhododendron (*Rhododendron arboreum*), Walnut (*Juglans regia*), Chestnut (*Aesculus indica*), etc.

#### Material and Methods

The primary data for the study was collected in three phases. First icebreaking and broad qualitative data was collected from women collectors through Focus Group Discussions (FGDs). Then Participatory Rural Appraisal (PRA) was conducted in each village to congregate background information. The tools used in PRA were Village Resource Mapping, Seasonal Calendar, Problem Ranking and Microplanning. In the third phase, quantitative data was collected through household survey on 107 women of four villages – Batwaldhar, Lambidhar, Chhandukhel and Goth. The numerical data collected were analysed statistically through SPSS software and documented. The secondary data was collected from District Horticulture Department, Dhanaulti Tehsil and Uttarakhand Forest Department. To measure the quantity of NTFP collected, headloads of fuelwood and fodder grass were weighed with spring balance. For NTFPs like leaves and vegetables, fruits and flowers, a rough estimate was made by measuring in a basket and also by discussion with respondents.

#### Results and Discussion

##### *Socio-Economic condition*

The primary data reveals that 62.8% women collectors belong to Hindu General Caste followed by 23.9% OBC and the rest 14.01% belong to SC Category. 76.6% respondents are married whereas 16.8% are widow. Literacy level among the women villagers of Dhanaulti is low. As per the study, 74.76% women respondents are illiterate followed by 12.14% who can only write their names.

Majority of the respondents (65.42%) practice only agriculture and animal husbandry for livelihood. Household members of 17.75% of the respondents do private service along with agriculture and 5.6% do Government jobs. Ecotourism is another major source of income. 69.15% respondents are small farmers having landholding from 1 to 2 ha followed by 29.9% marginal farmers with landholding less than 1 ha. 57%

respondents have semi-Pucca houses with slate roofs followed by 42.9% respondents having Pucca houses. It is interesting to note that 57.94% women have LPG connection but still all the households depend on fuelwood as the primary source of fuel. Annual household income ranges from INR 0.10 million – 0.30 million (US\$ 1505– 4514). Migration rate of young male members is high.

##### *Collection of Minor Forest produces*

The survey revealed that 80.37% women spent 2-4 hours daily for collection of forest produces for 10 months of the year. 100% women collect fuelwood and 96.26% collect fodder grass for livestock. 37.38% respondents collect seasonal leaves and vegetables like *Lengra* (a fern belonging to *Diplazium* species), Hisar (*Rubus duthieanus*), Bathua (*Chenopodium album*), Kandali (Bichhu ghaas), etc. 75.7% women collect fruits and flowers like Kafal (*Myrica esculenta*), Rhododendron (*Rhododendron arboreum*), Kingod (*Berberis chitria*), Bhamor (*Cornus capitata*). Only one woman (0.93%) from Lambidhar village collect medicinal plants from forest. All these forest produces are collected for household consumption.

71.03% women collect Branches or small poles once in a year for repairing house and agricultural implements. Local Forest Department permits to collect wooden poles (greater than 4 cm in width) only once in a year.

Fuelwood and fodder grass are collected daily or once in two days. The other NTFPs like leaves and vegetables, fruits and flowers are collected seasonally for 2 to 3 months in a year or once in a year. 68.22% respondents collect fuelwood once in two days while 30.84% respondents collect it daily. 93.45% women collect fodder grass daily from forest. 9.34% of total respondents collect leaves and vegetables for 2-3 months in a year while 27.01% women collect them once in a year. A majority of respondents (71.96%) collect fruits and flowers only once in a year.

##### *Quantity of Minor Forest Produces collected*

The analysis of data showed that 70.09% respondents collect 400-600 kg of fuelwood per head in a year. 12.14% respondents collect less than 400 kg while 17.75 per cent respondents collect more than 600 kg of fuelwood in a year. The quantity of fodder grass collected from forest in a year ranges from 200 - 1000 kg. About half of the women collectors (50.46%) collect

400-600 kg of fodder grass in a year whereas 45.79% women collect less than 400 kg of fodder grass.

While the quantity of leaves and vegetables collected from forest ranges from 3-20 kg, the quantity of fruits and flowers collected ranges from 3-100 kg per year per woman collector. 19.62% respondents collect more than 10 kg of leaves and vegetables in a year while 14.01% collect 5-10 kg of leaves and vegetables. 36.44% respondents collect 20-50 kg of fruits and flowers per year whereas 25.23% respondents collect 50-80 kg. The quantity of Branches collected from forest varies widely from 10 to 120 kg per year per woman collector. 35.51% respondents collect more than 80 kg of branches in a year, 20.56% collect 50-80 kg and 12.14% respondents collect 20-50 kg of branches.

Analysis of average quantity of NTFPs collected from forest shows that fuelwood has the highest demand. The average quantity of fuelwood and fodder grass collected is 521.49 kg and 390.6 kg respectively per year per woman collector. The average quantity of leaves and vegetables collected is 12 kg and fruits and flowers collected is 36.67 kg per year per collector. Branches are also high in demand and average quantity collected is as high as 77.7 kg.

### Constraints Faced by Women Collectors

Majority of respondents (43.92%) mentioned that they lack knowledge on proper methods of collection of forest products and training will be helpful. 18.69% women feel problem in walking and climbing hills due to illness and old age. 9.34% respondents expressed fear of attack of wild animals and same percentage of respondents mentioned about fear of breaking Forest Department rules.

### Storage and processing of forest produces

All the women collectors transport MFPs to their houses by headloads. 79.43% women collectors practice in-house storage of collected forest products for rain and snow. 57.94% women collectors do both sorting and sun-drying of forest products before storage while 23.36% women do only sun-drying.

### Conclusion

The women collectors expressed their eagerness to take part in training for collection, processing, value addition and marketing of NTFPs. Society for Natural Resource Management and Community Development (SNRMCD) conducted series of Awareness Workshops

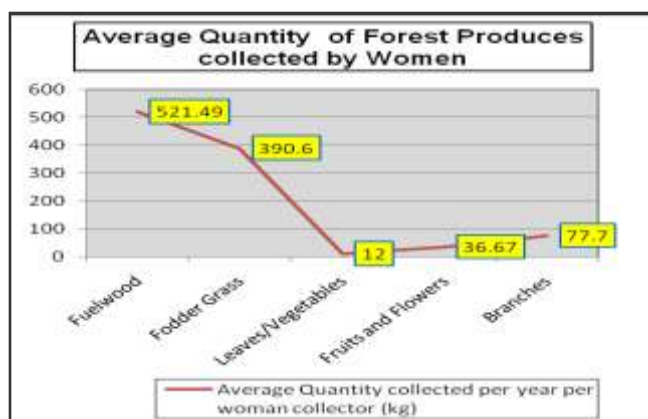
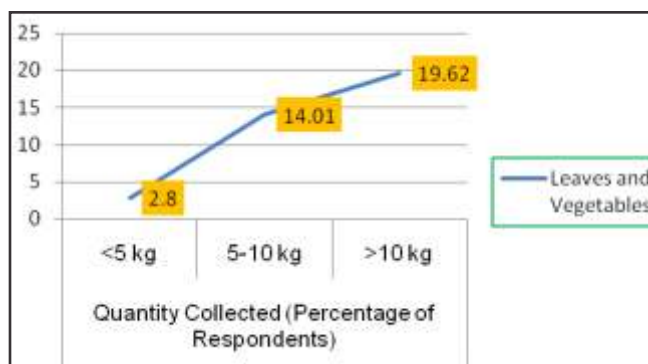
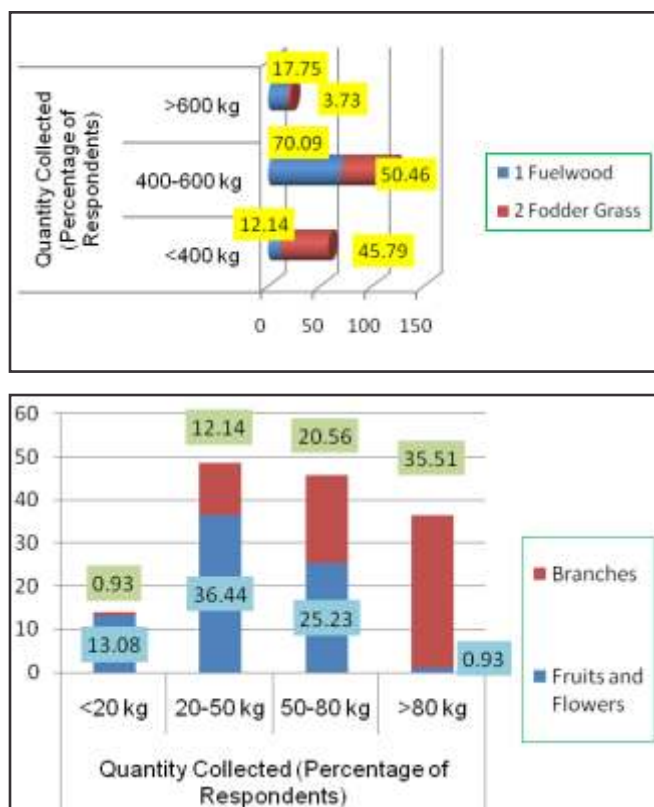


Fig. 1: Quantity of MFPs collected by women .



and Trainings for women collectors in Dhanaulti. Women Producer Groups have been formed in villages and linked with financial institutions. The women members have started preparing squash from Rhododendron flowers which are being sold locally. SNRMCD is providing technical and material inputs and also supporting in licensing and marketing. The

project has been presented at Fourth 'International Women of the Mountains Conference' held at Utah Valley University, USA and at XIX Commonwealth Forestry Conference at Forest Research Institute, Dehradun. The study was conducted with support of WOSB fellowship of Department of Science and Technology, Govt. of India.



Awareness Workshop with women collectors at Dhanaulti, Uttarakhand.

### पर्वतीय महिलाओं द्वारा गौण वन उपजों के संग्रहण एवं उपयोग पर अध्ययन सीजूती सरकार डे सारांश

महिलाओं द्वारा गौण वन उत्पादों के संग्रहण एवं उपयोग की गुणात्मक एवं मात्रात्मक आय के लिए उत्तराखण्ड, भारत में धनौली में चार गाँवों की 107 महिला ग्रामीणों पर अध्ययन किया गया। पर्वतीय महिलाएं वनों से ईंधनकाष्ठ, चारा, घास, पत्तियों एवं वनस्पतियों, फलों एवं फूलों, औषधीय पादपों एवं शाखाओं का नियमित रूप से संग्रहण करती हैं। अध्ययन से ज्ञात हुआ कि 100 प्रतिशत महिलाएं वर्षा और हिमपात के तीन महिनों को छोड़कर साल भर ईंधनकाष्ठ और चारा घास का संग्रहण करती हैं। 70 प्रतिशत से अधिक महिलाएं सालाना प्रति व्यक्ति 400-600 कि.ग्रा. ईंधनकाष्ठ एकत्र करती हैं। करीब 50 प्रतिशत महिलाएं सालाना प्रति व्यक्ति इतनी ही मात्रा में चारा घास एकत्र करती हैं। 37.38 प्रतिशत महिलाएं लिंगडा (डिप्लेजियम स्पीसिज), हिसार (रूबस ड्यूथिएनस) जैसे मौसमीय पत्तियों एवं वनस्पतियों को एकत्र करती हैं तथा 75.7 प्रतिशत महिलाएं मुख्यतः घरेलू खपत के लिए भमोर (कॉर्नस कैपिटटा), बुरांश (रोडोडेंड्रान) जैसे फलों एवं फूलों के एकत्र करती हैं। 35 प्रतिशत उत्तरदाता सालाना प्रति व्यक्ति 80 किलो से ज्यादा शाखाएं एकत्र करते हैं। 1 प्रतिशत से कम महिलाएं चिरायता (स्वीटिनिया चिरायिता), सतावर (एस्पेरेगस रेसीमोसस) और दारूहल्दी (बेरबेरिस अरिस्टारा) जैसी औषधीय शाकों को एकत्र करती हैं। 43.92 प्रतिशत महिलाओं में गौण वन उत्पादों के संग्रहण, प्रक्रमण एवं विपणन के विषय में जानकारी का अभाव है। व्यापारिक रूप से गौण वन उत्पादों का उपयोग करने में समर्थ न होने का यह मुख्य कारण है। परियोजना के तहत गौण वन उत्पाद के प्रक्रमण एवं विपणन पर प्रशिक्षणों का आयोजन किया गया ताकि पर्वतीय महिलाओं के लिए आय सृजन में सहायता की जा सके।

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