CPUH-Research Journal: **2018,** ***3(2),*** 163-167
ISSN (Online): 2455-6076
http://www.cpuh.in/academics/academic_journals.php

Inventorization of Non-timber Forest Products and their Valuation in District Hamirpur (H.P.)

Manu Vineet Sharma
Department of Botany, Career Point University, Hamirpur (H.P.), India-176041
E-mail: manusharma.v@gmail.com

ABSTRACT: Non Timber Forest Products play an important role as traditional source of food, medicines, fibre and fodder, etc. In some areas, they are also the source of cash income to the people. These products are minor, alternative and secondary which are obtained from the plants which are not timber yielding. A non timber forest products survey was conducted in Hamirpur district of Himachal Pradesh during 2017. A total of 15 plants belonging to13genera13 families were reported. The forest dwellers are progressively dependent on NTFPs for sustaining their daily livelihood instead of utilizing it as a prospective income source for their socio-economic development.

Keywords: Genera; families; traditional knowledge; shivalik range

INTRODUCTION

Traditionally Non Timber Forest Products (NTFP's) refer to all biological materials other than timber extracted from natural forest for human and animal use and have both consumptive and exchange value. Globally NTFP/NWFP are defined as "forest product consisting of good of biological origin other than wood, derived from forest, other wood land and trees outside forests" It is estimated that 275 million poor rural people in India – 27% of the total population depend on NTFP's for at least part of their subsistence and cash livelihoods (Malhotra & Bhattacharya; Bhattacharya & Hayat 2009). Non timber forest products are wild plants and fungi that people gather and use for food e.g. *Pyrus coronaria, Aloe vera* used as medicine, *Vitis labrusca* used as crafts and *Fraxinus nigra* used as spiritual purposes. NTFP's based development was therefore, born as a new development (Choudhary 2007). Many herbs, fruits, vines growing naturally in the forest are collected and sold into distinct markets. Tannin is extracted from *Accacia nilotica* bark. Tannin are the organic compound which are chiefly glucosidal in nature which have an acid reaction and very astringent (Agbogidi2010). Non timber forest products include numerous forest extracts such as bark, roots (*Berberis lycium)*, leaves (*Lawsonia inermis*), fruits (*Terminalia chebula)*, flower (*Woodfordia fruticosa)*, seeds (*Terminalia bellerica)* play important role in alkaloid and medicine property etc (Akhter, *et. al.* 2008). Non timber forest products used for subsistence purposes or for soil and thus providing case income. Medicinal Non timber forest products in total around 300 species are used for medicinal purposes. Majority of rural household depends upon in developing countries and a large portion of urban household depend on the products to meet some part of their nutritional health, house construction or other needs (Schackletnon *et. al.* 2015). . In the absence of proper management and control in the collection and trade, Non timber forest products are becoming vulnerable, endangered and even extinct (Acharya2000). Non timber forest product species need to be conserved and managed properly for the sustainable use of resources. The demand for non timber forest products in local markets and international market have increased (Ndah,2013).The forest of India harbour about 3,000 types of non timber forest product of which collection in individual state varies from 54-55%. There are number of region for general spread and upsurge in global interest in non timber forest product. It is believed that the promotion of sustainable use of non timber forest products could lead to a win –win situation for poverty reduction and biodiversity conservation. The traditional knowledge about plants was used by the local people of this region. The information was gathered through several visits, questionnaire and group discussions with local people of study region. The local people of the area use the large no. of plant species for yielding dye and tannin.

MATERIAL NAD METHODS

Study area: Hamirpur District is the one of the 12 District of the State of Himachal Pradesh India. The District occupies an area of 1,118 km/sq. It is situated between 31"25'N and 31"52'N and between 76"18'E and 76"44'E. The elevation varies from the 400m to 1,110m. The area is hilly covered by Shivalik range.

Methodology: The non timber forest product survey were conducted throughout the study period 2016 and 2017 in different are of Hamirpur district , among the local people. The plants specimens were collected during fruiting and flowering stage. Collected plants specimen during this survey were indentified and preserved in the form of herbarium. 15 wild plants belonging to13 families were reported which are used

as edible medicinal and traditionally. The method use to collect the data:

(a) The plants were collected and preserved in the form of herbarium.
(b) The information was collected from all local people of area.
(c) Interviews were conducted using semi structured questionnaire prepared for the local people.
(d) Plants were indentified and nomenclature with the help of the Choudhary H.J. and Wadhwa Flora of Himachal Pradesh and Indian Flora of B.S.I.

RESULTS AND DISCUSSION

About 15 non timber forest plant species were found to be used by the local people of Hamirpur District and these plant uses as vegetable, fruits, medicine and fodder. Wherever possible, local name also noted down. The final compile data is given in Table 1.

The present study includes 15 plants used for various purposes like food, fodder medicines etc. These plants belongs to 13 families of which fabaceae and rutaceae are most dominant and acanthaceae, berberidaceae, lamiaceae, moraceae and dioscoriaceae are least dominant. The study shows that out of 15 plants, fruit of 7 plants species, leaves of 3 plants species, whole plant 2 plants species , flower of 3 plants species and root of 1 plant species are used. The information generated in the present communication represents an immensely valuable data base that provides base line information and contributes in filling the knowledge gap for the completion of local biodiversity registers of the study area.

Figure 1: Map of Hamirpur district of H.P.

Plate No.1 *Adhatoda vasica* Nees

Plate No.2 *Ajuga ciliata* Bunge

Plate No.3 *Asparagus racemosus* Willd.

Plate No.4 *Artocarpus heterophyllus* Lam.

Plate No.5 *Bauhinia vahlii* Wight.& Arn

Plate No.6 *Bauhinia variegata* L.

Plate No.7 *Berberis aristata* Sims.

Plate No.8 *Carissa opaca* Stapf ex Haines

Plate No.9 *Centella asiatica* (L.) Urb.

Plate No.10 *Cissampelos pareira* L.

Plate No.11 *Citrus limon* (L.) Burm.f.

Plate No.12 *Citrus aurantiifolia* (Christm.) Swingle

Plate No.13 *Dioscorea deltoidea* Wall.

Plate No.14 *Emblica officinalis* Gaertn.

Plate No.15 *Ficus palmata* Roxb.

Figure 2: Photo plates

CONCLUSIONS

The study revealed that indigenous communities in Hamirpur district nurture rich knowledge about non timber forest product. The local people of Hamirpur district use the plant products for different purposes such as medicinal, edible, traditional, and religious.Rapidly growing urbanization of the area unfortunately posing a threat to its plant diversity, traditional knowledge and cultural activities of the rural people. The present study shows that Hamirpur region is rich with valuable medicinal flora and people are enriched with folk traditional knowledge about these herbs. Though this knowledge is passing orally one generation to another but it has not been documented yet. The objective of non timber forest products is to improve livelihoods and conservation of forest resources, these resources can best be assured through a process of gradual domestication in human modified.

Table 1: List of non timber forest products used for medicinal and traditional purposes

Sr. No.	Botanical name	Local name	Family	Part used	Uses
1.	*Adhatoda vasica* Nees	Basuti	Acanthaceae	Flower & Leaves	Treatment of cough asthma etc.
2.	*Ajuga ciliata* Bunge	Neelkanthi	Lamiaceae	Whole Plant	Used in ear ache and dysentery.
3.	*Artocarpus heterophyllus* Lam.	Kathal	Moraceae	Fruit	Unripe fruit is used as vegetable.
4.	*Asparagus racemosus* Willd.	Sanspali	Asparagaceae	Tender shoot	Treatment of many diseases.
5.	*Bauhinia vahlii* Wight. & Arn.	Toryaa	Leguminosae	Leaf	Prepare umbrella& plates.
6.	*Bauhinia variegata* L.	Karyalae	Leguminosae	Flower and bud	Treatment of skin cancer & piles and ulcers.
7.	*Berberis aristata* Sims.	Kasmalu	Berberidaceae	Leaf, fruit & bark	Treatment of fever and snake bite.
8.	*Carissa opaca* Stapf ex Haines	Garnu	Apocynaceae	Fruit& flower	Treatment of skin diseases and dysentery.
9.	*Centella asiatica* (L.) Urb.	Brahmi	Apiaceae	Whole plant	Treatment of skin diseases and brain tonic.
10.	*Cissampelos pareira* L.	Bhatindu	Menispermaceae	Leaf	Treatment of cattles.
11.	*Citrus aurantiifolia* (Christm.) Swingle	Galgal	Rutaceae	Fruit	Treatment of gout indigestion etc
12.	*Citrus limon* (L.) Burm.f.	Nimboo	Rutaceae	Fruit	Juice is taken for indigestion & acidity etc
13.	*Dioscorea deltoiea* Wall.	Tardi	Dioscoreaceae	Root	It is anti inflammatory dietary modulator.
14.	*Emblica officinalis* Gaertn.	Amla	Euphorbiaceae	Fruit & stem	Used in treatment of constipation & lever disorder.
15.	*Ficus palmata* Roxb.	Kangoo	Moraceae	Fruit	Treatment of pneumonia.

REFERENCES:

1. Acharya, T.P. (2000). Conservation of Non Timber Forest Products (NTFPs) in Humla, Nepal. Proceedings of third regional workshop on community based NTFP management, Kathmandu, Nepal. South, East Asian Countries NTFP network (SEANN), 264-271.
2. Agbogidi, A.O. (2010). Ethnobotanical Survey of the Non Timber Forest Products. *African Journal of Pharmacology Science*, **4(3)**:183-189.
3. Akhter,S., Halim,A., Sohel,M.S., Sarker, S.K. ,Chowdhury, M.S.H. and Sonet,S.S. (2008) A review on the use of non-timber forest products in beauty-care in Bangladesh. *Journal of Forestry Research* 19(1):72–78.
4. Arnold, Ruiz J.E.M.and Perez, M. (1998). The role of Non Timber Forest Products in Conservation and Development. In: E Wollenberg, A Ingles (Eds.): Incomes from the forest: method for the development and conservations of forest product for local communities. *Journal of Human Ecology*, **33(1)**:17-42.
5. Bhattacharya,P. And Hayat,S.F.(2009). Sustainable NTFP management for Livelihood and Income Generation of Tribal Communities: A Case from M.P. India in: (Uma S.R., Hiremath A.J., Joseph G.C. and Rai N.D. (ed.) Non timber Forest Products: Conservation Management and Policy in the Tropics. ATTREE & University of Agriculture Science, Bangalore: 21-34.
6. Choudhary,P.R..(2007). Forest route to poverty alleviation Myths and realities: Analysis of NTFP-livelihood linkages in some Indian states. *Journal of Human Ecology*, **33(1)**:4-7.
7. Huntington,H.P.(2000).Using Traditional Ecological Knowledge in Science. *Ecological applications*: 1270-1274.
8. Malhotra, K.C. and P. Bhattacharya (2010). Forest and Livelihood. CESS, Hyderabad: 246.

9. Ndah, M.L. (2013). Ethnobotanical study of commonly used medicinal plants of the takamanda rain forest southwest. *Journal of plant science*, **7(1)**:21-34.

10. Shackelton,C.M.,Shacklelton, S.E.(2004). The Importance of Non Timber Forest Products in rural livelihood security and as safety-nets: Evidence from South Africa. *African Journal of Science Management*, **6(47)**:635-647.