

RESEARCH ARTICLE

Biodiversity of NTFPs and its usages from Tirora Tehsil of Gondia District (MS), INDIA

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ABSTRACT

Non-timber forest products are much important in worldwide for their significant role in livelihood, which encompasses with medicinal plants, dyes, mushrooms, fruits, bark, leaves, flowers, seeds, honey, roots and tubers. 45 different plant species were mostly extracted as NTFPs for Edible, Construction, fodder, fuel, medicine, household and commercial purposes. Apart from this, Wild edible vegetables are common NTFPs such as Mushroom and the honeys that have been extracted widely through the tehsil. The present study suggests that, tribal peoples are more dependent on NTFPs. The collectors most in need of income support from NTFPs are least able to benefit from an NTFP-based development strategy as they have the poorest developed skills, lack resources to store.

Key words: - NTFPs, Diversity, Livelihood, Dependency, Used pattern.

INTRODUCTION

In India, more than half of its population lives in rural areas and a large tribal population are dependent on NTFPs for their sustenance and cash income (Hedge *et al.*, 1996). NTFPs are significant especially for poor peoples, which provide the alternative to food as well as income source. Out of 3000 forest product, 126 forest species were identified as a potential market product (Maithani 1994). Non-timber forest products (NTFPs) serve the valuable products for enhancing the rural development, expands economic growth, cultural endurance, and environmental health in local, national and international markets (Wilkinson & Elivitch, 2000). The socio-economic importance and the value of NTFPs in the economics of tropical countries are now well recognized (Gupta and Gularis, 1982; FAO, 1995). In almost all tropical countries, the collection of NTFPs is a major economic activity (Alexander *et al.*, 2001; Ambrose, 2003). In this paper we estimate the quantities of NTFPs are harvested and it's used pattern in different ways. However, overharvesting of NTFPs can have a negative impact on conservation of biodiversity. In general, however, the impact of extraction of NTFPs on forest structure and composition is unknown for most extractive reserves.

MATERIAL AND METHODS

Study Area : Geographically, Tirora Tehsil is located in north-western part of Gondia district, Eastern Maharashtra of Central India. It lies between 21 22'03" to 21 38'09"N latitude and 80 00'00" to 80 21'24" E longitudes.

Total of 9 villages were selected for present investigation and are covered by 2013.45 ha. forest area. These villages are Berdipar, Bhajepar, Chorkhamara, Ghoti, Lonara, Sarra, Nimgaon, Bodalkasa, Mangezari and Balapur. The Present Study carried out during the month of January to November 2013. Extensive Village survey was conducted to capture information on aspects of NTFPs dependence and its use patterns in the village. A total of 180 individual, 20 individuals from each village actively involved in collection of NTFPs were interviewed through the household survey

RESULTS & DISCUSSION

During the investigations, total 45 plants were identified as NTFPs. Out of 45 plants, 26 plants were observed as Edible, 4 plants were used for construction purposes, and 15 and 31 plants are used for commercial and medicinal purposes, respectively (Table 1). Basu and Mukharjee (1996) have studied the uses of some plants as source of food in "Paharies" of Purulia District and recorded the 16 wild plants as food source.

Table 1: Different Parts of NTFPs used for Different purposes (Use pattern)

S.N	Botanical Name	Family	Local Name	Parts used	Use pattern	A	B	C	D
1	<i>Buchanania lanzan</i> Spreng.	Anacardiaceae	Charoli	Seed	Edible,	√	√	√	√
				Leaves	Plate Making				
2	<i>Semecarpus anacardium</i> L.	Anacardiaceae	Bhelau	Fruits	Edible, Medicine	√			√
				Seed					
3	<i>Mangifera indica</i> L.	Anacardiaceae	Aam	Fruits	Edible	√		√	
4	<i>Annona squamosa</i> L.	Annonaceae	Sitaphal	Fruits	Edible, Medicinal	√		√	√
5	<i>Amorphophallus campanulatus</i> (Roxb.)	Araceae	Suran	Tuber	Edible, Medicinal	√			√
6	<i>Asparagus racemosus</i> (Kunth) Baker	Asparagaceae	Shatavari	Tuber	Medicinal				√
7	<i>Cassia tora</i> L.	Caesalpiniaceae	Tarota	Leaves, Flower	Edible, Medicinal	√			√
8	<i>Terminalia chebula</i> Retz.	Combretaceae	Hirda	Fruits	Medicinal, edible	√		√	√
9	<i>Terminalia bellerica</i> (Gaertn.) Roxb.	Combretaceae	Behada	Fruits	Medicinal, edible	√		√	√
10	<i>Diospyros melanoxylon</i> Willd.	Ebenaceae	Tendu patta	Leaves	Beedi making			√	
11	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Aola	Fruits	Medicinal, Edible	√		√	√
12	<i>Bauhinia vahlii</i> Wt.&Arn.	Fabaceae	Mahur	Leaves	Plates making			√	
13	<i>Butea monosperma</i> (Lamk.) Taub.	Fabaceae	Palas	Leaves	Plates, dye, Lac making			√	
				Flower					
14	<i>Pongamia pinnata</i> (L.) Merr. Interpr.	Fabaceae	Karanja	Fruits	Medicinal				√
15	<i>Chlorophytum tuberosum</i> Baker.	Liliaceae	Musali	Tuber	Edible, Medicinal	√			√
16	<i>Phoenix sylvestris</i> (L.) Roxb.	Palmae	Sindi	Leaves	Broom making, Edible	√	√	√	
				Fruits					
17	<i>Tamarindus indica</i> L.	Papilionaceae	Chinch/ Imali	Fruits	Medicinal, Edible	√		√	√
				Leaves					
18	<i>Bambusa</i>	Poaceae	Bamboo	Stem	Basket and Household		√	√	
19	<i>Ziziphus sp.</i>	Rhamnaceae	Ghoti	Fruits	Edible, Medicinal	√			√
20	<i>Ziziphus jujuba</i> Lamk.	Rhamnaceae	Ber	Fruits	Edible	√		√	
21	<i>Ziziphus oenoplea</i> L.	Rhamnaceae	Aeroni	Fruits	Edible	√			
22	<i>Aegle marmalos</i> (L.) Corr.	Rutaceae	Bel	Fruits	Edible, Medicinal	√			√
23	<i>Madhuca longifolia</i> (Koen.) Mac.	Sapotaceae	Mahua	Flowers	Edible, liquor	√		√	√
				Seeds					
24	<i>Sterculia urens</i> Roxb.	Sterculiaceae		Gum	Edible, Medicinal	√			√
25	<i>Curcuma aromatica</i> L.	Zingiberaceae	Ranhalad	Rhizome	Edible, Medicinal	√			√
26	<i>Tinospora cordifolia</i> (Willd)	Menispermaceae	Guduchi/ Gudwel	Whole plant	Medicinal				√
27	<i>Carissa carandas</i>	Apocynaceae	Karvanda	Fruits	Edible	√			
28	<i>Helicteres isora</i> L.	Sterculiaceae	Murad-sheng	Fruits	Medicinal				√
29	<i>Curculigo orchioides</i> (Gaertn.)	Amaryllidaceae/ Hypoxidoideae	Kali-musali	Roots	Medicinal				√
30	<i>Andrographis paniculata</i> (Burn.F.) Wallich	Acanthaceae	Bhuinimb	Whole plant	Medicinal				√
31	<i>Dioscorea bulbifera</i> L.	Dioscoriaceae	Matalu	Tubers, bulbils	Edible	√			
32	<i>Costus sp.</i> Koenig	Costaceae	Dukar-kanda	Bulbils	Medicinal				√
33			Padar	Leaves	Household		√		
34	<i>Lawsonia inermis</i> L.	Lythraceae	Mahendi plant	Leaves	Dyes			√	

Table 1: Continued...

S.N	Botanical Name	Family	Local Name	Parts used	Use pattern	A	B	C	D
35	<i>Hemidesmus indicus</i> (L.) R.Brown	Periploceae	Anantmud /Khoberwell	Roots	Medicinal				√
36	<i>Cassia fistula</i>	Caesalpinaceae	Bahawa	Seeds	Medicinal	√			√
				Flower	Edible				
37	<i>Moringa oleifera</i>	Moringaceae	Shevaga	Fruits	Edible	√			
38	<i>Ricinus communis</i>	Euphorbiaeae	Eranda	Fruit oil	Medicinal & edible	√			√
39	<i>Spilanthes paniculata</i> Wall. Ex DC	Asteraceae	Akkalkhada	Leaves	Medicinal				√
40	<i>Bombax ceiba</i>	Bombacaceae	Katesawar	Bark	Medicinal				√
41	<i>Nerium indicum</i> Mill		Kanher	Seed	Medicinal				√
42	<i>Ficus racemosa</i>	Moraceae	Umber		Edible, Medicinal	√			√
43	<i>Manilkarazapota</i> (L.) P. van.	Sapotaceae	Chiku	Fruits	Edible	√			
44	<i>Terminalia arjuna</i>	Combretaceae	Arjun-Ajn	Bark	Medicinal				√
45	<i>Abrus precatorius</i> L.	Fabaceae	Gunj	Seeds	Medicinal				√
	Total		26	4	15	31			

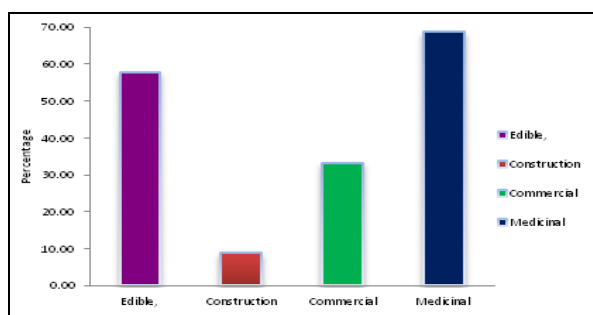


Fig. 1 Use of Pattern of NTFPs

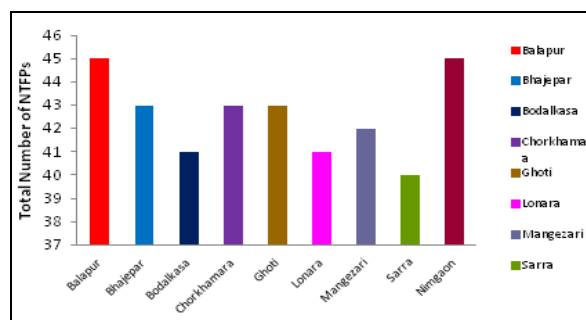


Fig. 2: Total NTFPs found in villages of Tirora Tehsil

Apart from this total 68.89% and 57.78% NTFPs are used as Edible and Medicinal purpose, respectively. However, only 8.89% and 33.33% are used for construction and commercial purposes, respectively (Graph-1). Similarly In west Bengal, various districts such as Purulia in which the local people prefer traditional medicine due to its low cost and social prejudice (Chakraborty et al., 2003).

In Balapur, Nimgaon villages the maximum amount of NTFPs are used for livelihood as compare to the Bhajepar, Chorkhamara, and Ghoti while in Mangezari, Bodalkasa, Lonara and Sarra were less amount of NTFPs found (Graph 2). Wild edible vegetables such as Mushroom and the honeys are extracted widely. Maske et. al. 2011 demonstrates that NTFP are alternative sources of income to the villager to improve their socio-economic condition as well as increasing the income level and employment opportunities.

CONCLUSION

The present study suggests that, Tribal peoples are more dependent on NTFPs. Thus the forest resources in the form of NTFPs play an important role in the socio-economic safety net of the forest dwellers. The study reveals that almost all of the forest dwellers depend on the forest products other than timber to

varying degrees. The rich NTFP resource, therefore, calls for further research on various aspects and a framework for sustainable utilization.

REFERENCES

Alexander SJ, McLain RJ, Blanter KA (2001) Socioeconomic research on non-timber forest products in the Pacific North-west, *J. Sustainable.*, 13:95 -105.

Ambrose-Oji B (2003) The contribution of NTFPs to the forest poor:evidence from the tropical forest zone of South-west Cameroon. *Int. For.Rev.*, 5:231-233.

Basu R, Mukharji PK(1996) Food plants of the tribe Paharies of Purulia. *Ad. Plant Sci.*, 9(2):209 -210.

Chakraborty MK, Bhattacharjee A (2003) Plants used as masticatories by the ethnic communities of Parulia district, West Bengal, India. *J.Econ. Taxon. Bot.*, 27(3):568-570.

FAO (1991) Non wood forest products: The way Ahead, Rome, Italy.

Hegde R, Suryprakash S, Achoth L, Bawa KS (1996).Extraction of NTFPs in the Forests of B.R. Hills. Contribution to Rural Income.Economic Botany, 50, 243p. In: Uma Shankar R, et al. (ed.) 2004.

Mahesh M and Alka C (2011) Impact of NTFPs on rural tribes economy in Gondia District of Maharashtra, India.

Maithani GP (1994) Management perspectives of Minor Forest Produce.MFP News, October-December, 1994.Dehradun.

Wilkinson MK, Elivitch RC (2000) Non-Timber Forest Products for pacific islands: An introductory guide for producers. Agroforestry Guides for pacific Islands, Permanent Agriculture Resources, Holualoa, Hawaii, USA.