

Role of Tribals in Collection of Commercial Non-Timber Forest Products in Mayurbhanj District, Orissa

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ABSTRACT Investigations have been made on medicinal values of higher plants but the role of Non-timber forest products (NTFPs) on the livelihood of tribals in Mayurbhanj district of Orissa are unfortunately ignored. The dominant tribes involved in using NTFPs in the district are *Santhal*, *Kol*, *Bhumija*, *Bhuyan*, *Mahalis*, *Sounti* and *Saharas*. This study documents the uses and trading of 37 NTFPS on the basis of field surveys and taxonomic identification of plants. Some of the important genera of the district are *Cyperus*, *Desmodium*, *Blumea*, *Dendrobium*, *Indigofera* and *Ficus*.

INTRODUCTION

Until the past decade or so, non-wood forest products (NWFPs), or non-timber forest products (NTFPs) have been considered as “minor” forest products in many countries. Production and consumption of NTFPs have never been appeared as resources of great economic importance at the macro level, but contribute a minor share to the national economy in comparison to commercial timber. At the micro level, however, tribal people living in and around forests for centuries have recognized NTFPs as important forests resources. Non-timber forest products refer to all biological materials other than timber, which are collected from natural forests for human use. Ethnobotanical researchers have so far brought on record over 500 plants as significantly used by the tribals as food, dyes, tannins, drugs, narcotics, drinks, housing instruments, weapons, fibers and medicine (Chaudhury 1986).

Commercial NTFPs are leased out by the forest department and the tribals are involved in the

collection and sale of these products. NTFPs provide local job opportunity to millions of people every year and contribute significantly for rural economy as more than half of the products are consumed by the tribals living in and around the forest area to meet their basic needs. Thus, the economy of rural masses depends mainly on various non-timber forest products available in their area. At present, the practice of collection by the tribals are vanishing as a result of rampant deforestation and the displacement of the tribals from their traditional habitats (Kennedy 2006).

The Mayurbhanj district of Orissa harbours a rich diversity of species, which generate considerable benefits from social and economic perspectives. Since time immemorial, the intimate association and dependence of the tribal communities on the local natural resources have empowered them with invaluable knowledge on bio-resource utilization and consequently they have developed extensive knowledge on various plants.

Investigations have been made on medicinal values of angiosperms of this region (Pandey and Rout 2006; Rout et al. 2009; Saxena et al. 1988) but the importance of NTFPS on the livelihood of tribal is unfortunately ignored. The present paper reports the collection, uses and trading of 37

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NTFPS on the basis of field surveys and taxonomic identification of plants.

STUDY AREA

Mayurbhanj, the district of Orissa, exhibits varied topology extending from plain land to highly undulating hill ranges. As the geography speaks, most of the area is in the hill ranges of extended Chhotnagpur plateau and is covered by the Similipal forest ranges. Within Mahanadian Biogeographic region, Similipal presents features of four biotic provinces for which Orissa is the junctions. In fact geological studies, fossil histories and recent studies indicate that Similipal is biological link between the northern and southern India (Singh 1998). The landscape of Mayurbhanj comprises numerous rolling hills covered with Northern tropical semi-evergreen forest, Northern tropical moist deciduous forest, Dry deciduous hill forest, High level Sal forest, Grass land and Savannah. Mayurbhanj presents wide gradient of geological, elevational and climatic features because of which the biodiversity value is high.

Seventeen major genera are found in district i.e. *Cyperus*, *Desmodium*, *Blumea*, *Dendrobium*, *Indigofera*, *Ficus*, *Acacia*, *Leea*, *Lindernia*, *Anirolema*, *Anthraxon*, *Bauhinia*, *Terminalia*, *Cassia*, *Cheilanthes*, *Butea* and *Carex*.

In Mayurbhanj district, tribes occupy a big chunk of the population constituting 52% of it. Fifty-three communities both aboriginal and migrated are found in the district glorifying the rich heritage of tribal culture (Naik 1988). The major tribes are Santal, Kolhs, Bathudi, Kharia, Mankidia, Gond, Ho, Bhuyan, Paudi and Bhuyan. Some of the tribes namely Kharia, Mankdias and Saharas are still in primitive state of living. They depend solely on their surrounding plants for more of their requirements from food to medicines (Rout 2004; Saxena et al. 1988). Kharias mostly collect non-timber forest products like honey, resin, lac and arrowroot etc. Mankidias collect mostly Siali fibre and use it for rope making. Some of the tribes like Gond and Bathudi spend their time in collecting Sabai grass from the forestland. They hardly come out of the forests to the plain area only to collect salt, potato, or onion in exchange of honey and resin collected by them (Pattnaik 1997).

METHODS OF COLLECTION

During the season of collection, local tribals

including male, female and children collect the non-timber forest product inside forest. Since the collection season is spread over the whole year for different items, the MFPs collection activities provide employment to the local tribes almost through out the year. The collection and quantity depend on the availability of NTFPs. A majority of species is available during the month of April to July. For collection of NTFPs, villagers including tribal women go deep inside the forests and cover long distances ranging from 2-5 km. The tribal women give more time along with their children for collection of NTFPs. From early age, tribal children become habituated for collection of MFPs. Therefore, the literacy percentages of tribal children are recorded very less. Data on the ethno botanical resources are collected mainly through informal interviews with the tribals who are involved in the collection of NTFPs.

RESULTS AND DISCUSSION

Non-timber forest products available inside forest area can be classified under various heads. (a) Fiber and flosses; (b) grass, bamboo and canes; (c) edible MFPs; (d) essential oil including those from grasses; (e) medicinal plants; (f) tans and dyes; (g) gums and resins; (h) leaves, fruits and seeds. Some of these are very useful to the local population for meeting their subsistence consumption need while other is of commercial importance. The ethnobotanical resources not only provide the three basic needs of life, i.e. food, shelter and clothing but also strengthen the economic status of the forest dwellers. These resources provide incentives to rural poor for maintaining the sustainability of forest ecosystem and help to preserve biological diversity and traditional knowledge. Maharashtra, Madhya Pradesh, Chhatisgarh, Bihar, Jharkhand, Orissa and Andhra Pradesh constitute nearly 65% tribal population of India and contribute about 70% of NTFPs production (Guha 1983).

The month wise NTFPs collection in Mayurbhanj depicts that, thirty seven items from sal leaf to tasar are collected by tribals (Table 1). The important NTFP's are sal leaf, tasar, myrobolans, honey, wax, resin, mahua flowers, mahula seeds, kusum seeds, sal seeds, sunari bark, siali fibre, lac, tamarind and different types of other fruits and seeds. It is noted that except a few, most of the NTFPs are restricted to a particular season and they are not common to all seasons. Normal-

ly, the tribal women along with their children collect the NTFPs in different pockets of Mayurbhanj district. Therefore, literacy rate in tribal areas is very low.

Average quantity collection of some of the MFP (Minor Forest Products) items per day by an individual in different season shows that each individual can collect maximum quantities of sal seed followed by karanj and kusum seeds. Trading of the MFP items is generally done at Gurguria (near Jashipur), Jashipur, Kendumundi, Thakurmunda, Sarat, Karanjia and Udala weekly market (Table 2). Apart from local consumption, NTFPs are exported to different parts of India. There are a large number of medicinal fruits, seeds, roots and barks that are collected and exported (Table 3).

The quantity of non-timber forest products collected by the tribals depends upon several factors. The economic status remains one of the important criteria. The very poor and poor tribals with small land holdings collect maximum quantity of NTFPs i.e. 28% and 22% respectively and sell a large quantity of the product in the market. The medium collects only 9% and higher income group (2%) rarely depend upon NTFPs.

Due to lack of sufficient plain land in the

district, most of the forest and hill dwellers do not depend upon agriculture as the chief source of livelihood. Tribals of Orissa in general and Mayurbhanj in particular use NTFPs as staple food and ingredients in traditional medicines and engage themselves in cash sale for earning their livelihood in the economy where empowerment and under-employment are high. Most of the non timber forest products are transported away from the area due to lack of processing facilities locally, resulting in loss of value that could have been added to them by village and cottage industries. However, considerable potential exists in marketing the existing NTFP and developing useful products by using knowledge accumulated by the local people who used them in a variety of ways. Forward and backward linkages may be established in order to retain the benefits of collecting and harvesting locally. Although the collecting and harvesting operations to many non-timber forest products are seasonal, the trade can give year around employment due to availability of variety of such products in the forests of Mayurbhanj.

To improve the economic condition of the tribal people residing inside Similipal forest of Mayurbhanj, the SFDC (Similipal Forest Develop-

Table 2: Average quantity collection of MFP items by individual in different season .

Name of the MFP items	Quantity collected per day	Period of collection
Arrowroot	1.5-5kg	Dec.-February
Gum	5-8kg	Aug-September
Honey	2-10kg	March-May & Sept.-October
Karanj seeds	15-25kg	Dec.-February
Kusum seeds	10-20kg	June-July
Resin	5-8kg	Nov.-December & May-June
Sal seeds	30-60kg	May-June
Wax	1kg	Mar.- May & Sept.-October

Table 3: Ethnobotanical resources collected by the tribals in Mayurbhanj district.

Local name	Botanical name	Family	Parts collected	Seasonal availability
Tentuli	<i>Tamarindus indica</i>	Caesalpiniaceae	Fruits	Dec.-February
Mahula	<i>Madhuca indica</i>	Sapotaceae	Flowers	April-May
Patalgaruda	<i>Rauvolfia serpentina</i>	Apocynaceae	Root	Around the year
Kochila	<i>Strychnos nux- vomica</i>	Loganiaceae	Fruits	Dec.-January
Bhuineema	<i>Andrographis paniculata</i>	Acanthaceae	Whole plant	Sept.-May
Char	<i>Buchanania lanzan</i>	Anacardiaceae	Seeds	April-May
Sabai grass	<i>Eulalia trispicata</i>	Poaceae	Whole plant	Dec.-January
Dhatki	<i>Woodfordia fruticosa</i>	Lythraceae	flower	Feb.-April
Aonla	<i>Phyllanthus emblica</i>	Euphorbiaceae	Fruits	Oct.-April
Bahada	<i>Terminalia bellirica</i>	Combretaceae	Fruits	Jan.-February
Harida	<i>Terminalia chebula</i>	Combretaceae	Fruits	Nov.-February
Mushrooms	-	Fungi	-	July-October
Rock moss	<i>Politricum densifolium</i>	Bryophyta	All parts	All months
Datepalm	<i>Phoenix sylvestris</i>	Palmae	Leaves	All months

ment Corporation) was established in 1982. The Canning Centre of Jashipur established during 1986 was one of the contributions of SFDC Ltd. which stands for procurement, preservation and implementation of certain non-timber food items available inside the Similipal forest area.

The NTFP collection contribute to the economy benefits significantly in day to day to the tribal community, where basic needs and livelihood earnings are significantly supported from collection and processing of these items. In Mayurbhanj, Kendu and Sal leaves is the major source of revenue providing considerable employment to tribals during the lean period of agriculture. Hence, its role in augmenting economy of rural people in this area is major and scope is good. Next in order is Sal seeds, Mahua flowers and Char seeds. Most of these are available for collection in particular season but they are utilized all the year round.

CONCLUSION

Non-timber forest products constitute an integral component of the food for the communities dependent on forests. Their role becomes more significant for less agricultural dependent communities with small land holdings residing in remote forests. Non-timber forest products provide far greater employment to the people than the wood. They have much greater potential for providing employment in future.

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