



## Tribal dependency on forests resources: Minor forest products

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### Abstract

Bamboos are a very important non-wood forest resources found in forest as well as non-forest areas in the country. They are fast growing, widely present, renewable, versatile and low cost natural resource with the growing demand of timber. Bamboos grow in extreme diverse ranges of soil conditions varying from organically poor to mineral rich soil; and moisture level from drought to flooding which makes them effective for reclaiming degraded lands. Bamboo species are environmental-enhancing resource, source of versatile and useful products and means of income for millions of people. The potential of bamboo species to proper utilization for economic growth to the tribal people of Bastar are identified. The Bastar tribes are collected the bamboo raw materials and making various products for income and livelihood purposes.

Therefore, the availability of bamboo resources in Bastar region and the tribal dependency on bamboo in Chhattisgarh as employment generation, and the identification and potential of bamboo species to proper utilization for economic growth to the tribal people. The study was conducted during June 2018 to July 2018 by interviewing with respondents of different ages groups at two villages namely Dhansara and Lingoguda of Bakawand block, Bastar district, Chhattisgarh. The information was collected with an open questionnaire which consists of question like demographic data, socio-economic status of families/households, land resources, livestock profile, economic activity, bamboo manufacturing technique etc.

The Bamboo artisans of the study area are highly involved in making various traditional handicrafts. They make the six domestic useful products of bamboos viz. Gopa, Takra, Tukna, Supa, Mat, Dhuti etc, and sold at local weekly markets. It was found that the maximum monthly income from bamboo products is Rs. 8730.00 at village Dhansara and whereas Rs.11500.00 in village Lingoguda among bamboo artisan. They directly benefited to bamboo resources in Bastar forests. Mainly three species; Lathi Bans (*Dendrocalamus strictus*), & Pahari Bans (*Bambusa burmanica*), Barya Bans (*Bambusa balcooa*) are used for making bamboo articles by the tribal people and these are easily found in Bastar forest floor. Present study emphasizes the sources of income from the different handicrafts prepared by the Bastar artisans with the sustainable utilization of minor forest products / forest resources.

**Keywords:** forests, non-wood forest resources, bamboo species, bastar, tribal, income, livelihood, handicraft, bans

### Introduction

Bamboos are a very important non-wood forest resources found in forest as well as non-forest areas in the country. They are fast growing, widely present, renewable, versatile and low cost natural resource. They are also known as green gold and poor man's timber (Ladapo *et al.*, 2017) <sup>[9]</sup>. With the growing demand of timber, bamboos are viable substitute for timber in the country. They can grow in extreme diverse ranges of soil conditions varying from organically poor to mineral rich; and moisture level from drought to flooding which makes them effective for reclaiming degraded lands. Bamboos play an important role in carbon sequestration and biodiversity conservation. Bamboo craft are deep rooted forest in traditional culture of all three ethnic group of Bastar. Various attractive eco-friendly products are made out of bamboo and cane, such as fruit and vegetable baskets, mugs, flower vases, tea trays, carry bags, containers, baskets, dustbins, mats, etc. The Bansods of Chhattisgarh make more than 200 different varieties of bamboo articles including a large assortment of baskets. The Kamar tribals of Raipur are adept at making baskets and other items like fish traps, mats and bird traps from bamboo (Tiwari, 2015) <sup>[13]</sup>.

Bamboos belong to the grass family Poaceae (Gramineae). In India, there are 125 indigenous and 11 exotic species of bamboos belonging to 23 genera (Negi and Naithani, 1994) <sup>[10]</sup>. India is second richest country of the world after China in terms of bamboos genetic resources as per the FAO report on world forest resources (Lobovikov *et al.*, 2007) <sup>[8]</sup>. The principal bamboo genera occurring in India are *Arundinaria*, *Bambusa*, *Chimonobambusa*, *Dendrocalamus*, *Dinochola*, *Gigantochloa*, etc. In the eastern region, i.e., West Bengal,

Assam and Northeastern Himalayas, the commercially important bamboos are *B. tulda*, *D. hamiltonii* and *Melocanna baccifera*.

More than 50 percent of the bamboo species occur in Eastern India, viz., Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and West Bengal. Other areas rich in bamboos are the Andaman and Nicobar Islands, Bastar region of Chhattisgarh and the Western Ghats.

The bamboo resource, despite its socio-economic and environmental benefits, currently, in most areas has been under high pressure due to land use changes, bamboo mass-flowering, poor processing with low value addition, and damage by bio deteriorating agents (termites, beetles and fungi). The preservative tests on Ethiopian bamboos revealed low natural durability and highlighted the paramount importance of appropriate protection measures such as Tanalith and vehicles used motor oil to increase durability, service life and rational utilization of bamboo based products and structures as potential alternative construction and furniture material (Desalegn and Tadesse, 2014) [3]. The socio-economic advantages are the wide distribution, availability, rapid growth and renewability, easy handling and desirable properties, environmental-enhancing resource, source of versatile and useful products and means of income for millions of people. (Ghavami, 2001; Ahmad and Kamke, 2003; Sastry, 2004; Wong, 2004; Bowyer *et al.*, 2005) cited by Desalegn and Tadesse (2014) [3].

Bamboo based value added industry in India is expected to grow to Rs. 2600 Cr in the year 2015. India's share in world trade from bamboo industry, which is Rs.2043 Cr. Currently is expected to be 27 per cent of the total market of Rs.100,000 Cr. Recent estimates place the bamboo market at about US \$12 Billion and the market is expected to double by 2015. The commercial consumption of bamboo globally is worth around \$ 10 Billion, India's share of the global market is estimated at \$ 1 Billion while China's share is currently the highest at \$ 5 Billion, Furthermore, the National Bamboo Mission estimated that India has utilized only a tenth of its bamboo producing potential. World market of bamboo is estimated to the tune of US \$ 10 Billion, which will be \$20 Billion by 2015. International trade in bamboo amounts to about US \$2.5 million (INBAR, 2005).

In Chhattisgarh naturally bamboo has found in all over the Chhattisgarh forests areas mainly the *Dendrocalamus strictus* is widely distributed in all over Chhattisgarh forests. In Sarguja District naturally found bamboo species are *Bambusa arundinacia*, *Bambusa natans* and *Dendrocalamus longispathus*. In Bastar forests region like Jagdalpur, Dantewada, Kanker about 80 bamboo species are found (Bannet and Gaur, 1971). Only 9 bamboos species identified since from 1971 according to Bisen and Ujjainii, 1971.

Therefore, the availability of bamboo resources (MFP) in Bastar forests region and the tribal dependency on bamboos to be explore various potential and culturally enriched bamboo articles of Bastar to promote employment and future opportunities to establish handicraft.

### Material and Method

The present paper deals on "Tribal dependency on forests resources; minor forest products" was carried out during the month of June 2018 - July 2018. The two villages namely Dhansara and Lingoguda situated in (19° 05'00.8 N" to 82° 01'39.4 E ") Bakawand block of Bastar District (CG) were randomly selected for the study. During the survey, the data on bamboo products, their selling prices and product wise income & net income were collected in June 2018 to July 2018 and data were analyzed. In each selected villages, all the households were interviewed to assess their dependence on forests. For this purpose, multiple point open questionnaire covering questions on various aspects, such as demographic details, socio-economic status of families/households, land resources, livestock profile, economic activity, general introductory information about local rates of handicrafts. The prices of various handicrafts in nearby markets, bamboo manufacturing technique etc., collected from the study site. Information was collected by way of village survey and personal observation of the investigators and also from focus group discussion with the villagers. The area is located between 23°29'–23°48'N and 90°5'–E and is bounded by Burichang upazila and Tripura state of India in the north, Laksham and Chauddagaram upazila in the south, Tripura State of India in the east, and Barura upazila in the west. Rajendrapur fores

### Results and Discussion

It was analyzed that bamboo resources is used in various ways. The Bamboo artisans of the study area are highly involved in making various traditional handicrafts. A total of six domestic products viz., Gopa, Takra, Tukna, Supa, Mat, Dhuti, were prepared by the Bamboo artisans. These handicrafts are used for various purposes. The results of study on Bamboo resources for employment generation of Tribal People of Bakawand forest range was carried out in two villages namely Dhansara and Lingoguda, Bakawand block of Bastar district (C.G.). The Bamboo artisans of the study area are highly involved in making various traditional handicrafts. They make the six domestic useful products of bamboos viz. Gopa, Takra, Tukna, Supa, Mat, Dhuti etc, and sold at local weekly markets. The details of bamboo handicrafts, materials (Culms) require, no. of products, selling prices and their income from bamboo products in both villages are presented in table No. 01 and 02. It was found that the total dependent ten (10) craftsman family are engaged for making the five types of handicrafts / bamboo products (Gopa, Takra, Tukna, Supa, Mat,) from the 35 no. of bamboo culms and get the maximum monthly income is Rs. 8730.00 at village Dhansara whereas maximum income Rs.11500.00 is found that in village Lingoguda and the total dependent seven (07) craftsman family are engaged for making the five types of handicrafts / bamboo products (Gopa, Takra, Tukna, Supa, Mat,) and they used 57 no. of bamboo culms (Fig.01 & 02). Tiwari (2015) [13] also studied that Bansods of Chhattisgarh make more than 200 different varieties of bamboo articles including a large assortment of baskets. The Kamar tribals of Raipur are adept at making baskets

and other items like fish traps, mats and bird traps from bamboo. There is tremendous potential for improving quality of bamboo products for meeting the demands of domestic and international markets. At global level, China has been leading the export market of bamboo products though India has the most area under bamboo resources (Lobovikov *et al.* 2007) <sup>[8]</sup>. Hogarth and Belcher, (2013) <sup>[5]</sup> reported that Bamboo's contribution to household income and rural development is clearly important as a major source of cash (for households in half of the villages), and for subsistence uses (for all sample households). The value of the subsistence contribution was low and reported to be declining (at all income levels, but nevertheless it remained a ubiquitous and highly utilized resource for a wide range of purposes). More significantly however, is bamboo's relatively new and important contribution to household cash income following the recent industrialization of the sector.

The bamboo resources in Bastar forests are abundantly available and the bamboo artisans of the both villages are directly benefited. the both study site, respondents, family size; presence of livelihood options, and hence they engaged in forest resources based income activities. The present investigation reveals that the bamboo handicrafts by way of domestic useful products is the best employment options to tribal empowerment with the governmental support.

**Table 1:** Total Bamboo products sold in weekly market, their selling prices and income at Dhansara villages.

S. No	Name of handicrafts	No. of culms required	No. of products sold	Selling price (in Rs.)	Product wise Income (in Rs.)
1	GOPA	6	20	80.00	1600.00
2	TAKRA	6	25	70.00	1750.00
3	TUKNA	6	30	50.00	1500.00
4	SUPA	9	35	80.00	2800.00
5	MAT	8	12	90.00	1080.00
Total	05	35	122		Rs.= 8730.00

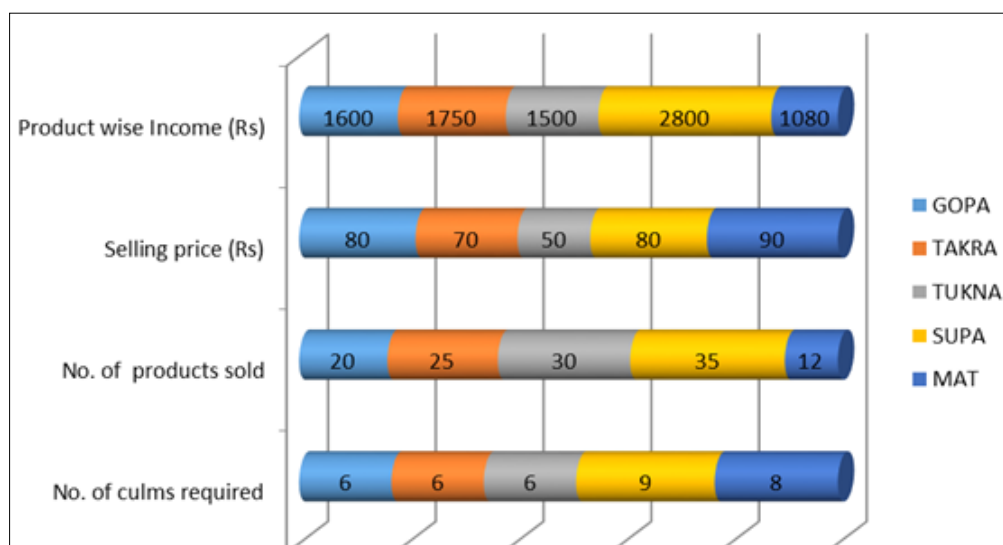
Total dependent family of craftsman - 10

No. of craftsman - 10

No. of culms required - 35

Values of culms - Rs. 50.00

Total no. of Handicrafts – 05



**Fig 1:** Selling and income from Bamboo products at village Danasara,

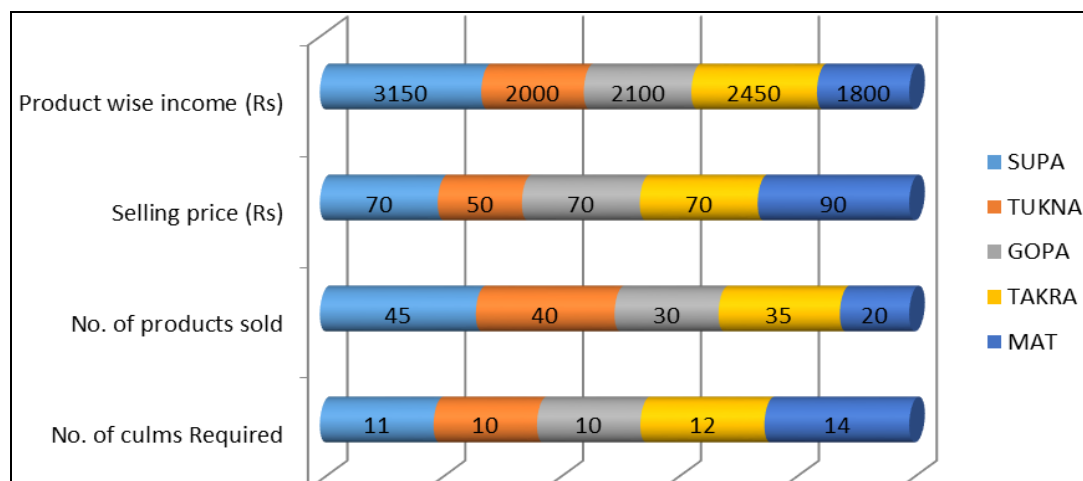
**Table 2:** Total Bamboo products sold in weekly market, their selling prices and income at Lingoguda villages.

S. No.	Name of Handicrafts	No. of culms Required	No. of products Sold	Selling price (in Rs)	Product wise income (in Rs)
1	SUPA	11	45	70.00	.3150.00
2	TUKNA	10	40	50.00	2000.00
3	GOPA	10	30	70.00	2100.00
4	TAKRA	12	35	70.00	2450.00
5	MAT	14	20	90.00	1800.00
Total	05	57	170		Rs 11500.00

Total dependent family of craftsman - 07

No. of craftsman – 17

Value of culms – Rs. 60.00



**Fig 2:** Selling and income from Bamboo products at village Lingoguda

**Table 3:** Bamboo Products and their selling prices at Lingoguda Village

S. No.	Bamboo Resources and Products	Selling price (in Rs)	Remarks
1	GOPA	80.00	Total Dependent Family at village Dhansara is = 07
2	TAKRA	70.00	
3	TUKNA	40.00	
4	SUPA	80.00	
5	MAT	90.00	
6	JHADU	15.00	

**Table 4:** Bamboo products and their selling prices at village Dhansara Bastar (C.G)

S. No.	Bamboo products	Market price (in Rs.)	Remarks
1	GOPA	90.00	Total tribal family dependent is = 05
2	TAKRA	80.00	
3	TUKNA	50.00	
4	SUPA	90.00	
5	MAT	100.00	
6	JHADU	20.00	

The bamboo handicrafts and their market prices in local weekly markets of Bakawand block, Bastar district (CG) is presented in the table no., 03 & 04. It was reported that the maximum Rs 90.00 is a selling price of Gopa followed by the Takra (Rs 80), Tukna (Rs.50), Supa (Rs.90), and Jhadu (Rs.20) per piece at the local market of Bastar district, (C.G.). The tribal people of Bakawand block of Bastar district of Chhattisgarh mainly dependent on natural resources like non –timber forest product bamboos. There are so many different types of materials are culturally made with bamboo materials like – Gopa, Takra, Tukna, Supa, Mat, Jhadu and Dhuti. Mainly species like Lathi Bans (*Dendrocalamus strictus*), & Pahari Bans (*Bambusa burmanica*), Barya Bans (*Bambusa balcooa*) found in Bastar District. The tribal used for making bamboo articles in these three bamboo species because this species easily found in this area.

### Conclusion

The tribal people of Bakawand block, Bastar district of Chhattisgarh mainly dependent on natural resources like non –timber forest product bamboos. There are so many different types of materials are culturally made with bamboo materials like – Gopa, Takra, Tukna, Supa, Mat, Jhadu and Dhuti. Mainly species like Lathi Bans (*Dendrocalamus strictus*), & Pahari Bans (*Bambusa burmanica*), Barya Bans (*Bambusa balcooa*) used for making bamboo articles by the tribal people and these three bamboo species are easily found in this area. The tribals of Bastar also depend on other NTFP's for generating their livelihood. Bamboo is main sources of income generation of the tribal people of the bastar district. Bamboo is main sources of income generation of the tribal people of the Bastar district. Weekly net income having Rs. 8730.00 from the village Dhansara whereas Rs.11500.00 in Lingoguda village at the study site. They sold the bamboo products in local market at the village level. The tribals of Bastar also depends on other forest products i.e. NTFPs for generating their livelihood.

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