



# Importance of Minor Forest Produces in Tribal Livelihood: A Study of Koraput District in Odisha

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**Abstract.** Forest constitutes a major source of natural capital of the country. Minor Forest Products (MFPs) are a key source of employment in India, both in directly and indirectly, through collection, processing, and sale. The MFPs have had a significant positive impact on the lives of people who reside in and near the forest. MFPs are an important source of nutrition for indigenous people, particularly those living in the most impoverished regions of our country. In certain circumstances, MFPs can serve as a person's primary source of cash income, enabling them to cover non-subsistence expenses like healthcare and education. The forest serves as both a home and a source of food for the Odisha indigenous people. The beliefs, customs, economy, and social structures of the tribal people are all closely linked to the forest. The MFPs are one of the most important resources for tribal populations' survival in rural Odisha. MFPs are utilized for domestic use and offer vital nutrients to those residing in forest areas. MFPs are a source of monetary revenue for many indigenous groups who engage in agriculture, particularly in lean seasons. Even though MFPs play a significant role in sustaining tribal economies and ways of life, their potential is still wildly underutilized, and they have not made a significant impact on reducing poverty in rural regions. In light of this, the study critically assessed the importance of MFPs and their role in sustaining the livelihoods of the tribal people in Odisha.

**Keywords:** Scheduled Tribes, Minor Forest Produce and Livelihood.

## 1 Introduction

Forests of any nation play a major role in both economic growth and ecological stability. In the process, the forest gives society access to a variety of goods and services, including food, fuel, medicine, tools, and materials for crafts. It also improves agricultural productivity and ecotourism. More significantly, the forest provides a substantial source of livelihood for the most vulnerable members of society, particularly the tribal people. India is a developing country in the globe. Most people who live in this country are in rural areas. For the rural economy, forests are the major source throughout the year substantially. For those who live in rural areas, forest resources are contributing significantly both socially and economically. As, due to the low productivity of agriculture in present days, forest resources often support

the livelihood pattern of rural society and they offer a variety of benefits, including jobs and incomes through a collection of food, fuelwood, fodder, and construction materials for building home; and support in agricultural activities in rural society.

According to the Food and Agriculture (FAO) report, "Forest sector is the second largest land use after agriculture. In remote forest fringe villages about 300 million tribal and other local people depend on forest for their subsistence and livelihood and about 70% of India's rural population depends on fuelwood to meet its domestic energy needs. For about 100 million of them, forests are the main source of livelihood and cash income from fuelwood, non-timber forest products (NTFP) or construction materials. More than half of India's 70 million tribal people, the most disadvantaged section of society, subsist from forests." (Biswas, P.K., <https://www.fao.org/3/XII/0586-C1.htm> ) Further, it demonstrates the way the minor forest products have greatly improved the lives of people who live in and around the forest. Many states in the nation have an abundance of forest resources that support the rural poor's way of life. According to the study of an Expert Group (2004), over 70 per cent of MFPs are found in five states i.e., Maharashtra, Madhya Pradesh, Bihar, Odisha, and Andhra Pradesh, in which 65 per cent of the tribal people live in these states. Further, MFPs are an important raw material for small, rural, village-based businesses because these products also increase the country's income through the replacement of imports and exports (Report of the Expert Group, 2004: 114).

## 2 Minor Forest Produces in India

Forest resources are one of the primary sources of natural capital in any country. The forest sector in India is the main driver of indirect employment and self-employment. Its operations revolve around the procurement, processing, and retail of many minor forest products to generate revenue for the country. There are many products, like bamboo, cane, oilseeds, grasses, fibres, gums, and resins; other materials include medicinal plants, spices, honey, leaves, roots and seeds, which are a major source of everyday income for rural poor, particularly the forest dwellers (Mitchell, C.P. et al, April 2003,). Table 1 below lists the various types of minor forest products along with their respective usage in different categories:

**Table - 1**

**Minor Forest Produce falls under various categories:**

|                     |                                                                                                                                                                                                                                                                                               |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Edible products     | Several forest species like fruits, flowers, seeds, roots, rhizomes, tubers, etc. are edible. Young bamboo shoots, Moringa, Madhuca indica flowers, Anacardium occidentale, Tamarindus indica, Syzygium cumini, Emblica officinalis, Buchanania Lanzas, fruits, and seeds etc. are in demand. |
| Grasses and grazing | Approximately thirty per cent of the nation's livestock population finds grazing space in forests. In the forest, grasses such as Censhrus, Heteropogon, Bothriochloa, Andropogon, Eragrostis, Iseilema, and others are widely distributed as                                                 |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | ground cover. A few grasses, such as <i>Eulaliopsis binata</i> , are also utilized to make paper and rope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Fodder trees and shrubs | For fodder, specific trees, shrubs, and climbers are available in the forest. Many tree species' leaf litter is nearly as nutrient-dense as agricultural fodder crops. <i>Leucaena leucocephala</i> , <i>Ailanthus Excelsa</i> , <i>Albizia lebbek</i> , <i>Moringa oleifera</i> , <i>Sesbania</i> spp., <i>Morus alba</i> , <i>Hardwickia binata</i> , <i>Quercus</i> , <i>Pongamia pinnata</i> , <i>Bauhinia</i> , <i>Grewia</i> , and <i>Celtis</i> etc. are some examples of good quality tree species that produce fodder. Several climbers, shrubs, and plants can also provide high-quality fodder leaves. |
| Bamboo and canes        | India has abundant bamboo resources. Bamboo is utilized for a variety of purposes, including packaging, paper pulp, rural agricultural activities, and housing.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Oil seeds               | In forests, numerous tree species yield valuable oil-bearing seeds for commercial purposes. Some of these oils are safe for consumption by humans. Generally, soap industries use these seeds. For tribes, these oils have a multitude of uses.                                                                                                                                                                                                                                                                                                                                                                   |
| Essential oils          | A valuable source of income from the forest is essential oils. The Indian forest is home to several species that yield essential oils, which are used to make soaps, perfumes, cosmetics, and other products.                                                                                                                                                                                                                                                                                                                                                                                                     |
| Tans and dyes           | The forest yields a variety of tanning materials from vegetables. The myrobalan nuts and wattle bark are notable examples. Additional tanning materials are <i>Anogeissus latifolia</i> and <i>Emblica officinalis</i> leaves, <i>Cleistanthus collinus</i> bark, <i>Ziziphus xylopyra</i> fruits, <i>Cassia fistula</i> bark, <i>Terminalia alata</i> bark, <i>T. arjuna</i> bark, and so forth.                                                                                                                                                                                                                 |
| Gums and resins         | When the tree's bark is cut or damaged, the tree releases gums and resins. Several tree species are used to harvest gums. Resins are widely used in Indian medicines and industry.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Fibres and flosses      | There is a wide variety of fibre-producing plants in the Indian forests. Fibers for cordage, rope, and cloth can be extracted from the tissues of a variety of woody plant parts.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Flavouring plants       | Numerous plants are taken out of forests and used both domestically and internationally. These include the dried capsule of <i>Elettaria cardamomum</i> , cumin (seeds of <i>Carum carvi</i> ), cinnamon (bark of <i>Cinnamomum zeylanicum</i> ), and bay leaf (leaves of <i>Cinnamomum tamala</i> ).                                                                                                                                                                                                                                                                                                             |
| Animal products         | Products made from animals include meat, bones, fur and feathers, horns, skins, tusks, musk, honey, and silk. The lac bug, which feeds on <i>Butea monosperma</i> and other forest trees, secretes lac, a sticky substance. Similarly, plantations of <i>Terminalia alata</i> and <i>Morus alba</i> are used to raise silkworms. Another valuable crop that comes from woods is honey.                                                                                                                                                                                                                            |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Leaves                        | Leaves from various forest tree species have been used for several purposes and have increased forest revenue since prehistoric times. The leaves of many plants and shrubs are utilized for food, fodder, medicine, and other things. In addition, the leaves of certain trees and bushes are used for the following purposes and crafts: thatching, making baskets, making umbrellas, and manufacturing Bidi (country cigarette) etc. from the leaves. |
| Tendu leaves and other plants | Tendu leaves ( <i>Diospyros melanoxylon</i> ) are sometimes called "bidi" leaves since they are used to manufacture "Bidis." The leaves of trees like <i>Shorea robusta</i> and <i>Pterospermum acerifolium</i> are used to make plates, "dona," and other objects.                                                                                                                                                                                      |

Source: Er. Doll Chutani and Pratibha Singh, "Status and Scope of Minor Forest Produce", Handbook of Minor Forest Produce Processing, pp. 11-12.

### 3 Importance of Minor Forest Produces

Minor forest products are an important source of income for tribal people in India. This covers a variety of forest products like bamboo, canes, fodder, leaves, gums, waxes, colours, and resins, as well as foods such as nuts, wild fruits, honey, and dairy. About 100 million people live in or close to forests in India, and they rely on minor forest products for both their daily needs and financial stability. A significant amount of forest products is used for their food, medicines, and financial benefits by selling the products in the market. Tribals spend a lot of time in forests, as a result, 20 to 40 per cent of their yearly revenue comes from minor forest products. There is a direct correlation with women's financial empowerment because the majority of minor forest products are gathered, used, and sold by women. Further, the country's minor forest products industry can generate roughly 10 million workdays per year (MSP for Minor Forest Produce, <https://trifed.tribal.gov.in/division/mfp-for-msp> ). The economic value of minor forest products was revealed in a report of the National Committee on Forest Rights Act, 2011, published by the Tribal Co-Operative Marketing Development Federation of India Limited, Ministry of Tribal Affairs. According to a report, "The collection and marketing of minor forest products directly provides a livelihood for an estimated 100 million people." According to a World Bank estimate, the MFP economy is fragile but supports close to 275 million people in rural India, a significant part of which comprises the tribal population". Quoted from the report that the "MFPs provide essential nutrition to people living in forested areas, and are used for household purposes, thus forming an important part of their non-cash income. For many tribal communities who practice agriculture, MFPs are also a source of cash income, especially during slack seasons." (Tribal Co-Operative Marketing Development Federation of India Limited, <https://trifed.tribal.gov.in/non/timber/mfp-mfp> ) The table 2 clarifies how tribal communities are economically dependent on minor forest products.

**Table - 2****Economically Important MFPs seasonally:**

| Seasons             | Minor Forest Products                                   | Economy Value                                                                                                                                                                                                    |
|---------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| January to March    | Mahua flower, Lac (Resin), and Tamarind                 | Almost 75 % of tribal households earn Rs. 5,000 a year from gathering Mahua flowers in the states of Odisha, Madhya Pradesh and Andhra Pradesh. Three million people work in the lac manufacturing industry.     |
| April to June       | Chironji, Sal seeds and Tendu leaves                    | Around 30 million forest dwellers depend on the seeds, leaves, and resins of Sal trees; more than 3 million people engage in bidi processing, while 7.5 million labour for about 90 days to gather tendu leaves. |
| July to September   | Bamboo, Chironji, Mango, Mahua fruits, and Silk Cocoons | 10 million people make their living from bamboo; whereas only 1,26,000 households cultivate tussar silk.                                                                                                         |
| October to November | Lac, Kullu gum, Resins used in incense sticks           | Gum collection provides three lakh person days of employment.                                                                                                                                                    |

Source: TRIFED, <https://trifed.tribal.gov.in/non/timber/msp-mfp>

Additionally, the Ministry of Tribal Affairs made a note that “MFPs are especially important for the poorest households living in forested areas, especially women. A research study (The Livelihood School, BASIX, 2010) shows that in Chhattisgarh, the involvement of women in the MFP economy is very high, tribal households depend on the MFP economy more than non-tribal households and poorer households more than comparatively better-off ones. The MFP economy is a critical one for the most vulnerable sections of society. A list of the important MFPs, in terms of their collection potential besides importance for livelihood” Table 3 presents the estimated production potential and collection potential of MFPs.

**Table-3****MFPs: Estimated Production Potential and Collection Potential:**

| Commodity    | Estimated Production Potential |                     | Estimated Collection Potential |                     |
|--------------|--------------------------------|---------------------|--------------------------------|---------------------|
|              | Qty in Lakh MTs                | Value in Rs. Crores | Qty in Lakh MTs                | Value in Rs. Crores |
| Tamarind     | 02.00                          | 0240.00             | 02.00                          | 0240.00             |
| Mahua flower | 01.50                          | 0122.00             | 01.00                          | 081.00              |
| Mahua seed   | 01.00                          | 0110.00             | 00.50                          | 055.00              |

|                    |                                |                     |                                |                               |
|--------------------|--------------------------------|---------------------|--------------------------------|-------------------------------|
| Sal seed           | 01.60                          | 0160.00             | 01.00                          | 0100.00                       |
| Tendu              | 80.00<br>(In standard<br>bags) | 01040.00            | 40.00<br>(In standard<br>bags) | 0520.00                       |
| Bamboo             | 048.00                         | 012.00              | 012.00                         | 0300.00                       |
| Karanja seed       | 00.40                          | 040.00              | 00.25                          | 025.00                        |
| Myrobalan          | 01.30                          | 078.00              | 00.75                          | 045.00                        |
| Chironjee          | 00.10                          | 0230.00             | 00.05                          | 0110.00                       |
| Lac (Stick<br>Lac) | 00.25                          | 0150.00             | 00.20                          | 0120.00                       |
| Gum Karaya         | 00.05                          | 062.00              | 00.03                          | 037.00                        |
| Wild Honey         | 00.30                          | 0270.00             | 00.25                          | 0230.00                       |
| Puwad seed         | 00.50                          | 050.00              | 00.20                          | 020.00                        |
| Neem seed          | 00.25                          | 025.00              | 00.25                          | 025.00                        |
| Total              |                                | 03777.00<br>4000.00 |                                | 01908.00<br>1900.00<br>Crores |

Source: TRIFED, <https://trifed.tribal.gov.in/non/timber/msp-mfp>.

#### 4 Tribal Share of Minor Forest Produces

The tribal economic system is a subsistence economy. Agriculture is the primary occupation for the majority of tribal people but it does not fully sustain them. As a result, the tribal people mostly rely on the forest produce they gather, some of which they eat, and the remaining parts of which they sell to augment their household income. In this situation, gathering minor forest products might guarantee the tribals a source of livelihood in the summer season. Additionally, it has been shown that the primary source of income for tribal households with less than five acres of agricultural land is the collection of minor forest products. (Reddy, Kalsani Mohan, 2018:5) Tribal inhabitants mainly depend on minor forest products for their subsistence in underdeveloped regions of the country. The main source of income for many tribals can be minor forest produce, which enables them to pay for non-subsistence needs like healthcare and education. Table 4 illustrates the percentage of MFPs that belong to indigenous people as reported in the 1999 report of the Expert Committee appointed by the Ministry of Forests and Environment.

**Table-4**

**Tribal Share of the MFP Market:**

| Sl. No. | Commodity            | Tribal Share (In per cent) | Procurement Value (Rs. in Crore) |
|---------|----------------------|----------------------------|----------------------------------|
| 1       | Hill Grass           | 100.00                     | 150.00                           |
| 2       | Tamarind             | 65.00                      | 60.00                            |
| 3       | Sal+Mahua+Other tree | 100.00                     | 100.00                           |

|    | borne oil seed            |        |        |
|----|---------------------------|--------|--------|
| 4  | Mahua Flower              | 100.00 | 15.00  |
| 5  | Tej Patta                 | 100.00 | 35.00  |
| 6  | Siyali Leaves             | 100.00 | 35.00  |
| 7  | Shikakai                  | 100.00 | 10.00  |
| 8  | Honey                     | 25.00  | 15.00  |
| 9  | Myrobalan                 | 100.00 | 10.00  |
| 10 | Sericulture (Muga/Tassar) | 100.00 | 30.00  |
| 11 | Shellac (Lac)             | 100.00 | 75.00  |
| 12 | Gum (Karaya) & Others     | 100.00 | 15.00  |
| 13 | Other Commodities         | 100.00 | 100.00 |
| 14 | Estimated Supply          | 95.00  | 650.00 |

Source: Tenth Report, Standing Committee on Social Justice and Empowerment – 2005-06, (Fourteenth Lok Sabha), Ministry of Tribal Affairs, Grants-in-Aid to State Tribal Development Cooperative Corporations for Minor Forest Produce Operations, Lok Sabha Secretariat, New Delhi, December 2005.

In the table-4, it demonstrates the tribal dependence on the forest for their sustenance. The tribal families mostly collect MFPs for self-consumption as well as for the sale of non-consumable products to meet their domestic economy. Over the last decades, it has been found that the availability of MFPs is being drastically reduced, due to various development projects, illegal commercialisation of forest resources etc., and the lives of tribal families adversely affected. Earlier, tribals were collecting more amount of forest products for self-consumption and a minimal amount to sell at the local market. Due to the illegal commercialization of MFPs, there was intense competition among the tribal families that collected MFPs, which resulted in the collection of immature plants, leaves, flowers, fruits, barks, roots, and tubers, damaging the mother plant and providing fewer benefits to the community that depends on the forest (Tenth Report, December 2005: 7-9).

## 5 MFPs and Tribal Livelihood in Odisha

Odisha is the homeland of 62 different Scheduled Tribe communities, dispersed over the entire state. According to the Census 2011 report, the state is home to 95,90,756 Scheduled Tribe communities, representing 9.17% of India's total tribal population and 22.85% of the state's overall population. Odisha contains more ethnic groupings than any other state in the nation, including both Scheduled Tribe populations and Particularly Vulnerable Tribal groups (PVTGs). In terms of numbers, Odisha is the largest tribal community, followed by Maharashtra and Madhya Pradesh, respectively (Ota, A.B., Tribal Atlas of Odisha: 2). The majority of Odisha's tribal communities are found in the southwest of the state. The districts in the state with a preponderance of tribal population are Mayurbhanj, Keonjhar, Sundargarh, Kandhamal, Koraput, Rayagada, Malkangiri, Nabarangpur, and Gajapati. Tribal people make up almost 50% of the total population in these nine districts. Odisha is

home to sixty-two tribal communities. Out of the 62 tribes, thirteen are primitive. The most important tribal communities are the Kondh, Oraon, Paraja, Santhal, Gond, Juang, Gadaba, Bonda, and Sauora. The forest resources are crucial to the socio-economic lives of the tribal groups in Odisha. Minor forest produce (MFP) gathering and sale in the market are regular activities for the tribal population of Odisha, particularly the vulnerable tribal groups (PVTGs) (Tripathy, Ambuja Kumar, 2020:186).

The study of N.K. Behura demonstrated that “forest plays an important role in the life of tribal people. It caters to their basic needs by providing food, water, fibres, fodder, timber and saleable minor forest produce. The life and culture of the tribal people are closely linked with the forest. The economy of several tribal communities, particularly those of the primitive groups, revolves around forests and forest products. Minor forest produce constitutes 15 to 50 per cent of the income of several tribal families.” (Behura, N.K., 2002: 73). The tribes of Odisha place a great deal of importance on their forests. During a food crisis, forests are seen to be the most significant source of subsistence. It augments their earnings as well as their consumption. The tribes rely primarily on hunting and collection of forest products. There is a symbiotic relationship between Tribes and forests. They have a sentimental attachment to the forest and they practice their traditions and rituals to a large extent in these forests. Table 5 demonstrates that forest products are collected by tribal people at varying times of the year.

**Table-5****Minor Forest Produce Calendar:**

| Name of the Month | Calendar Months       | Minor Forest Produce Collection                                                                              |
|-------------------|-----------------------|--------------------------------------------------------------------------------------------------------------|
| Chaith - Baisakh  | March to May          | Mahua flowers (in Chaith), Barda Saag, Mango, Shiyali leaves, Mahua seed, and Small Khajoor.                 |
| Aashar - Jeth     | May to July           | Barda Saag, Char Phal, Jackfruit, Jamun, Kendu leaves, Mahua seeds, Nangalkandha, Saal seeds, Small Khajoor. |
| Sawan - Bhado     | July to September     | Mushrooms (Bino Chatti, Sawan Chatti, Bati Chatti, Bans Chatti, Bali Chatti), Karkat Phal.                   |
| Kartik - Aasin    | September to November | Peeta Kandha, Karke Kandha, Jhuna, Honey, Babe (a kind of grass used to produce ropes).                      |
| Push - Aghan      | November to January   | Amla, Beharra, Harra.                                                                                        |
| Magh - Phagun     | January to March      | Mahua, Tamarind.                                                                                             |

Source: Dayal, Harishwar, Faria Noamani, Debraj Bagchi, and Jaykishan Godsora, *State of the Adivasis in Odisha 2014: A Human Development Analysis*, Institute for Human Development, Delhi, 2014, p. 47.

The dependence of tribes on MFPs has grown over the years because of the decreasing size of holding and fluctuations in production. It is due to the increasing population and division of families, the agricultural holdings of the tribes have been divided causing a decrease in agriculture production. Further, Odisha has suffered from erratic rainfall that has resulted in severe fluctuations in the annual crop yields leading to excessive dependence on the forests to cope with food and income insecurity. To support the claim that MFPs are a significant source of income for tribal people, a study was carried out in the Koraput district of Odisha.

## **6 Study Area: Koraput District**

Koraput district was incorporated as a district of the state of Odisha on April 1, 1936. The district is bordered to the north by the district of Nabarangpur, to the south by the district of Vishakapatnam in Andhra Pradesh, to the east by the districts of Rayagada and Srikakulam in Andhra Pradesh, and to the west by the districts of Malkangiri and Bastar in Chhatisgarh. The Koraput district is situated in the southern region of the state close to the Eastern Ghats, and serves as the tribal group's hub in Odisha (District Statistical Handbook, Koraput, 2020:1). Koraput District, the heartland of the tribal community in Odisha, lies along the Eastern Ghats in the southern part of the State (Koraput, <https://koraput.nic.in/about-district/>). When the district of Koraput was established in 1936, several modifications occurred. Declaring the entire Koraput district to be a Scheduled Area, the President of India issued an order in 1950 based on the Scheduled Areas section of the Constitution (Senapati, Nilamani and N. N. Sahu, 1966: 273-274). The Scheduled Tribe population of Koraput district is 6,97,583 which is 50.6 per cent of the total population of the district. The Koraput district features a large amount of forest area, which makes up about 26.75% of the district's overall land area (District Statistical Handbook, Koraput, 2020:1-2). The district, with its abundant flora and fauna, thunderous waterfalls, terraced valleys rising to verdant hills, rolling mountains, undulating meadows, oozing springs, a scene of green and yellow primitive crops, a calming climate, and a simple populace with aboriginal culture and way of life, has managed to preserve its unspoiled beauty for all time. The Koraput district's tribal population has resided here since prehistoric times, leaving a rich cultural legacy in its wake.

Smita Mishra and Susanta Sekhar Choudhury's study demonstrated that "Koraput is rich in forest wealth. The forest consists of many economically useful plants. Tribes depend on the adjoining forests to fulfill their requirements of food, fodder, firewood, fibre and a variety of medicinal drugs and herbs. Food species harvested in the wild are more significant to the poor and landless, small and marginal farmers residing near the forests, as an essential complement to their staple foods both in times of food

scarcity and at normal times. Wild forest foods used in tribal diets include: leafy, vegetables, fruits and berries, roots and tubers and edible mushrooms. Such a range of foods keep up a continuous supply and provide a safety net against nutritional deficiencies” (Mishra, Smita and Susanta Sekhar Choudhury, 2012: 794). Tribal people's lives have continuously revolved around the forests. The tribes' dependence on forests is vital to their religious, cultural, and economic practices. Since the forest is their primary means of subsistence, it is also important to their economy. Tribal people and forests have a synergistic relationship. A few decades ago, the relationship between tribe and forest was ideal and peaceful. In the last three to four decades it has been seen a rapid change in this relationship that is detrimental to both sides. This is primarily the result of large-scale destruction of forest areas in the name of development, exploitation of forest resources by the private organisation without taking care livelihood of tribal communities, and restriction of tribal communities use the forest by formulating different forest policies. It has been observed that the tribal populations are not significantly impacted by any of the development initiatives in the tribal concentrated areas.

### **Laxmipur Block**

Laxmipur block has been chosen for the study based on the predominance of tribal communities and the socio-economic system revolves around the forest resources. The geographical area of the block is 310.33 sq. km having 103 inhabited villages (District Statistical Handbook, 2011: 14). The population of the block reported as 2,50,863, is primarily from rural areas. Out of the total population, the Scheduled Castes (SC) is 10.51 per cent whereas Scheduled Tribes (ST) 70.65 per cent (Census 2011, Laxmipur Assembly). The block is predominantly hilly and has a moderate forest cover. The major tribes found in the Laxmipur block are Paraja and Kandha. The study was carried out in the sample villages, mostly inhabited by the Kandha tribes of Laxmipur block. The language spoken by the people in the block is the Desia dialect, which is the local version of the Odia language. The tribes and non-tribes in the block have different social and cultural lives from one another. The tribal people's social and cultural practices have historically been strongly associated with the natural world.

### **Methodology**

This study is the result of a detailed field investigation and survey of sample villages. For this study, 06 villages have been selected in the Laxmipur block. In each village 20 sample households have been selected to collect data. A random sampling technique was adopted for conducting the field study considering the concentration of the tribal population in the sampling villages. The household survey was conducted using a questionnaire and oral interviews with villagers to obtain data/information on the use, annual collection and market value of MFPs by households in the selected villages. Government reports were consulted before the fieldwork to determine the study area's forest cover and the degree to which tribal people depend on forest

resources. The secondary literature was also referred to obtain a comprehensive understanding of the significance of forest resources in tribal life. Laxmipur block was chosen for the field study mainly due to two factors: first, its socio-cultural and economic proximity to the forest, and second, its large concentration of tribal inhabitants. Six villages overall, were selected from Kusumguda Gram Panchayat for this study. As was previously mentioned, agriculture does not produce enough food grains, hence the tribes of the study area have been dependent on the forest for their means of subsistence. Additionally, the forest has been central to the tribal people's socio-cultural activities for decades. It is necessary to use sample data to gain an understanding of the socioeconomic conditions in the tribal communities to calculate the degree to which the tribal people depend on the forest resources.

### **Respondents' social and economic background**

For a field study, six villages of Kusumguda panchayat in the Laxmipur block were selected. In each village, interviews were conducted with 20 sample houses. Consequently, a total of 120 sample houses were registered. There are responders in every village, starting at age 20 and spanning several age groups. Table 6 below shows the distribution of responders by age group.

**Table No - 6**  
**Age-wise Distribution of Respondents:**

| Name of the Village | Age- Group |                |                |               | Total     |
|---------------------|------------|----------------|----------------|---------------|-----------|
|                     | 20-30      | 31-40          | 41-50          | Above 50      |           |
| Chelsea             | 05         | 08             | 06             | 01            | 20        |
| Gadikhal            | 04         | 07             | 09             | -             | 20        |
| Birijodi            | 02         | 06             | 10             | 02            | 20        |
| Kusumguda           | 04         | 06             | 09             | 01            | 20        |
| Kurmuli             | 06         | 04             | 10             | -             | 20        |
| Phooljodi           | 03         | 05             | 11             | 01            | 20        |
| Total               | 24(20.00%) | 36<br>(30.00%) | 55<br>(45.83%) | 05<br>(4.16%) | 120(100%) |

According to the table, the age group of 41 to 50 years old accounted for the majority of respondents, followed by the age group of 31 to 40 years old. In addition to the age distribution of the participants, it was crucial to ascertain the respondents' educational attainment, as indicated by Table 7.

**Table No - 7****Level of Education of the Sample Respondents:**

| Name of the Village | Illiterate     | Primary    | High School   | Above High School |
|---------------------|----------------|------------|---------------|-------------------|
| Chelsea             | 13             | 07         | 00            | 00                |
| Gadikhal            | 09             | 11         | 00            | 00                |
| Birijodi            | 10             | 08         | 02            | 00                |
| Kusumguda           | 07             | 12         | 01            | 00                |
| Kurmuli             | 12             | 07         | 01            | 00                |
| Phooljodi           | 14             | 06         | 00            | 00                |
| Total               | 65<br>(54.16%) | 51 (42.5%) | 04<br>(3.33%) | 00                |

Table 7 indicates that the majority of respondents were illiterate across the entire sample. Therefore, it can be determined from the table that there are significantly more illiterate tribals than there are other communities in the block. Naturally, the table reveals that a small percentage (42.5 per cent) of respondents have just completed their elementary education, but they are unaware of the numerous government initiatives and programmes that are designed specifically for them. It's also critical to understand how the tribal members of the sample respondents make their living.

The tribal people's source of income is already noted in the socio-economic profile of the Laxmipur block; it comes from both agriculture and forest goods. To determine the degree of tribal people's dependence on various sources of income, such as agriculture, minor forest products, and daily wage labour, interviews with sample respondents have been conducted in this regard. Table 8 provides more information.

**Table No - 8****Economic Life of Sample Households:**

| Name of the Village (* #) | Agriculture   | Minor Forest Product | Daily Wage Labour |
|---------------------------|---------------|----------------------|-------------------|
| Chelsea                   | 16            | 20                   | 06                |
| Gadikhal                  | 11            | 20                   | 07                |
| Birijodi                  | 13            | 19                   | 11                |
| Kusumguda                 | 14            | 13                   | 13                |
| Kurmuli                   | 09            | 20                   | 09                |
| Phooljodi                 | 11            | 18                   | 07                |
| Total                     | 74 (61.66 % ) | 110(91.66 %)         | 53(44.16%)        |

Note: \*: There are 20 respondents overall in each village.

#: As some respondents have given multiple answers to a single question the addition of the total number of responses is not the same as the number of respondents interviewed, i.e., 20, but it is more than that.

It is clear from Table 8 that more than 90% of tribal people rely on forest resources for their daily needs. The conversation made it evident that depending only on agricultural products to support their family would not be sufficient, even though 61.66 per cent of respondents stated that agriculture is one of their primary sources of income. Because of this, the tribal people's primary source of revenue and year-round means of subsistence is the forest. Another advantage of the forest products is that the tribal women can live independently from financial burden all year round. It is crucial to comprehend the way of life of the tribal people and how they utilize forest resources at various points in their lives.

Since time immemorial, tribal people have used minor forest products for a variety of purposes, such as food, fodder, traditional medicine, household goods, building materials, and agricultural amenities. Numerous of these applications have cultural connotations. Natural edible plants are rich in proteins, minerals, and vitamins. They can be eaten at any time of year, depending on the season. In addition to the people who live in the forest edge regions, other rural people harvest minor forest products to sell on the market and support themselves. This is normal for a sizable section of the country. The majority of forest dwellers depend on minor forest products for their primary sustenance and health care. Minor forest products provide traditional forest dwellers with all of their necessities, such as food, shelter, and medicine. As a result, the improvement of rural economies is greatly impacted by minor forest products. The table 9 shows how tribal people depend on forest resources to sustain their way of life in addition to other socio-cultural practices.

**Table-9**

**Usages of Minor Forest Products in different stages:**

| Name of the Village (* #) | Household Consumption | Household Income | Social-cultural & healthcare care | Requirement of family |
|---------------------------|-----------------------|------------------|-----------------------------------|-----------------------|
| Chelsea                   | 20                    | 18               | 19                                | 13                    |
| Gadikhal                  | 18                    | 17               | 18                                | 12                    |
| Birijodi                  | 18                    | 16               | 16                                | 14                    |
| Kusumguda                 | 12                    | 11               | 16                                | 13                    |
| Kurmuli                   | 19                    | 15               | 17                                | 10                    |
| Phooljodi                 | 19                    | 16               | 18                                | 11                    |
| Total                     | 106<br>(88.33%)       | 93 (77.5%)       | 104(86.66%)                       | 73(60.83%)            |

Note: \*: There are 20 respondents overall in each village.

#: Since some respondents provided more than one response to a single question, the total number of replies is greater than the number of respondents who were interviewed, which is twenty.

According to Table 9 above, 88.33 per cent of the respondents claimed to depend on minor forest products for their living. 77.5 per cent of respondents claimed that their household income is derived from the forest. Furthermore, 86.66 reported that they depend on forest resources for both health care and sociocultural activities. However, 60.83 per cent of those respondents stated that they utilize forest products for necessities in their homes. It is crucial to delve deeply into the ways that tribal people use forest resources at various phases of their lives. Tribal societies' sociocultural and economic structures are closely related to the forest's resources. Therefore, it is imperative to discuss how tribals use minor forest products both for their everyday needs and for the preservation of sociocultural traditions. The discussion that follows reveals details about the tribe's way of life and how its connection with the forest products.

### **A. Household Consumption for Sustenance:**

The tribal people gather forest products to sustain themselves. For their primary source of income, they collected Minor Forest Produces (MFP), such as fruits, roots, leaves, mushrooms, and so forth. Mostly, they used to gather seasonal produce such as Aam (Mango), Jam (Guavas), Panas (Jackfruit), Tentli (Tamarind) Jambu Koli (Black Berries), Dumer, Paday, Konta koli, Chhar koli, Sindhi koli, Khajur koli, Bon bhalia, Kendu, Siadi, Amla, Harida, Bahada, Mahula, and Khojuri and Salap rasha. The roots of the jungle, namely Pit, Targa, Serenda kondas, etc. The seasonal vegetables, such as the Kardi (Bamboo shoots) and the Koliari, Majur Chendi, Chunchuni, Kokodi, Ghurdi, and Chakunda sag. Additionally, several kinds of mushrooms, such as Bitak, Jam, Bauns, Bidam, Manaya, and Balisora chatu. Tribes have therefore relied on forest resources all year long. The tribal people make a variety of traditional delicious dishes using forest resources, such as Taku Pita (mango kernel cake), Peg (liquid dish), Amsoda (mango juice pickle), and Amta (mango bark). They used to process to make Pej (a liquid food item made from its seeds), and Amiljhol (Rasom). They are making wine from the Mahul and have been utilizing the Kardi for the curry. As a result, the tribal people can use every part of the forest product—juice, bark, seeds, etc. in their meal.

The shifting cultivation is another source of livelihood for the tribal communities. Generally, in the tribal community, they used to select a patch of forest land cut down the shrubs and bushes and sow seed after the first monsoon. The shifting cultivation has not led to the destruction of forest resources because tribals are not doing the shifting cultivation in the thick forest area. Again, their customs, belief systems, ritual practices, and sacredness toward the trees, signify that, they used to preserve and manage the forest resources. In this regard, it is relevant to quote John Deeney and Walter Fernandes. They discussed in their study that shifting cultivation is one of the sources of tribal food. They pointed out that, the policymakers often considered that, shifting cultivation as a destructive practice of the forest by the primitive tribes. Its prohibition was recommended by the National Commission on Agriculture in 1976 and the 1952 Forest Policy. But in reality, it is considerably different as the

Government thinks about it. It is also important that, to some extent, it has become destructive, but this change is the consequence of other factors not of shifting cultivation itself (Deeney, John and Walter Fernandes, 1992, p. 50). Thus, this study is quite similar to the findings of the present study.

### **B. Household Requirement:**

The tribals of the sample villages depend on forest products not only for sustenance but also for basic needs for their household requirement. To build their home, they would gather wood from the forest for Deli and Patia (Timber), Baunsh (Bamboo), Chhana (Thatch), and Siadi Daudi (Siadi Rope). In addition, wood is used to make Nangal and Juadi (Hand Plough), Koten and Musil (Wooden Paddy Mill), and Sagad (Cart). Bamboo is primarily used to make a variety of shaped and sized baskets, known by different names such as Dudi, Tati, Porda, Kula, Changdi, and Churki, to carry or store different kinds of things. Furthermore, the tribes use bamboo to fence their house, property, and gardens to protect themselves from wild animals. Tribals depend on forests for their firewood. In addition to using the firewood for cooking, they also use it to stay warm throughout the winter and provide light for their home. It was revealed during a group discussion that the elder residents of the village typically burn firewood at the centre place of the village on cold winter nights and spend a lot of time there talking about various village issues. The elderly person used to burn firewood in the Umbai (Dish) to stay warm throughout the winter season even within their home.

The women used to gather Badni and Jhati (Brooms), Siadi leaves to stitch Kholi and Dona (Leaf plates), and Siadi bark to make rope. Additionally, they used to extract oil and use it as shampoo from the seeds of Kusum, Karanja, Tola, Joda, and Duma Joda as well as Shikakai. The tribe uses the forestland as a place for their animals to graze. They used to gather a variety of flowers from the forest, including Simli, Manahar, Etila, Jai, Girli, Kochan, Kudaya, Champa, Sanari, Niali, Rati Mali, Togor, Konyari, etc. for worshipping nature god and goddesses and celebrating different cultural festivals.

### **C. Socio-cultural & Health Care:**

The tribal way of life has always included the forest in its sociocultural and religious practices. They have been worshipping the sun, earth, hills, rivers, rain, forests, trees, and other elements of nature since their ancestors' time. They used to primarily think that by worshipping nature, they would be shielded from all bad things that might happen to their family, their town, or even their entire society. Through their traditions, they have also been worshipping their ancestral spirit in remembrance of their forefathers. During the survey, it was also revealed that the Jani, Disari, Bejen, and Beju (Traditional tribal priests) had a unique ability to worship the village deities in their society. Apart from this, the tribal society has a unique way of life because they used to depend on the forest for a variety of rites,

such as weddings, festivals, welcoming guests, and births and deaths. It is therefore important to discuss these tribal people's numerous rites and ceremonies and how they relate to the forest.

### **Gudi Debta:**

In the tribal society, the Gudi Debta is an important deity of the village. She is the village goddess and the villagers used to address her by different names known as Gudi Debta, Mata, or Thakurani. The Goddess is usually installed at the centre of the village. In some villages, she is also found at the entrance under the Banyan tree, Mango tree or Thatched hut. The goddess is represented by a sacred stone which is cylindrical and smeared with vermilion. In all rituals or offerings, the tribals used to worship and offer first to the goddess. Also, the first yield of their crops, vegetables and fruits is offered to Gudi Debta.

The tribal people believe that the Gudi Debta takes care of the village as a guardian. She also protects the villagers from any epidemics or evil spirits. Also, they knew that Gudi Debta may cause epidemics or fever if she became unhappy or unsatisfied due to any mistake made by the villagers during the rituals and offers. In tribal villages, Jani or Disari worship the Gudi Debta. It is the custom of the tribal society the village priest remains fasting till the completion of the ritual. The tribal women clean the sacred abode with cow dung. The goddess is worshipped with rice, milk, oil, fruits, leaves, flowers etc. At the end of the rituals, a feast is organised utilising the offered (rice, fruit, milk and meat) and the village priest use to takes the sacred food first in the feast.

### **Nishani Munda:**

The Nishani Munda is another important god in the tribal society. Mostly, the Paraja tribes used to worship the Nishan Munda. The Nishan Munda is represented by a big sacred stone which is placed at the centre place of the village. Mainly, they use to worships the Nishan Munda to protect the villagers from various epidemics. The pattern of the ritual practice of this deity is similar to the Gudi Debta.

### **Worshipping Ancestral Spirit:**

In tribal society worshipping ancestral spirit is common. Mostly the tribal people worship the spirit to remember their past ancestors. Also, if any member of the family was suffering from fever, they used to invite the Bejen or Beju (Traditional Priest) to chant mantras to satisfy the spirit of their family.

In addition, tribals used to celebrate a lot of festivals all year long. Nonetheless, two significant celebrations in the tribal civilisation are the Chait Parab and the Pousha Parab.

### **Chait Parab:**

The Chait Parab is one of the popular festivals in the tribal society. The festival has been traditionally named after the month of Chaitra, which falls in the month of mid-March to mid-April. In this festival, the Jani and Disari play an important role in worshipping and organising the festival. The festival continues for about one week and the villagers cherish and enjoy the period without doing any job. On the first day of the festival, every household first worships their household deities, then they move to the Nishanmunda. At the Nishanmunda, the villager prays to the Goddess for

protection from all kinds of hazards. Also, as per their tradition and rituals, they used to offer the newly grown mango to the deities before they used it for themselves.

One of the significances of the festival is communal hunting. In the communal hunting, the Disari of the village used to decide the date of the hunting. In the morning, the villagers go hunting and while returning from the forest, all the members conduct a ritual in the forest to please the forest deities. The festival ends with a ritual performed by the females for the well-being of their husbands and children. During the festival days, all the villagers drink wine made from forest products i.e., Mahuli (made from Mohua flowers), Tadi (Juice from Date trees), Salap (Juice from Salop tree), Landa (made in Cereals), Handia (Rice Beer) and dance with joy.

#### **Pousha Parab:**

The Pousha Parab is another important festival in the tribal society. This festival is also named after the month Phus which falls in the month of mid-December to mid-January. The significance of this festival is that the Jani or Disari worship the village deities to keep the cattle of the village healthier. Also, the tribal people used to feed Khichidi (prepared in Rice with jungle roots, fruits, and leaves and also pour a little bit of wine) to their cattle.

#### **Social Ceremony:**

The social ceremony of the tribal society has been closely linked with the forest. In every social ceremony, i.e., birth, death and marriage they used to depend on the forest. When a baby is born, the family members use to worship the forest Goddess for keeping them healthy and for a long life. Also, they apply the Kusum and Karanja oil to the newborn baby to keep warm and healthier. Even in death, whatever the status of the person, all the tribal carry the dead body on a bamboo ladder tied with ropes. Also to cheer on the child's birth or to avoid the sad of death, they used to drink wine.

The marriage ceremony of the tribal society is unique. From the very first day, the parents of the bridegroom go to the bride's house with one bottle of Mahuli wine and ask for their daughter's hand. Also, on the day of the marriage, the Mandap is built with wooden pillars and decorated with leaves of Jamun, Mango, Khajur and some flowers. Even, to greet their Maitar (Guest/friend), they used to offer wine i.e., Mahuli, Tadi, Salap etc. The food items of the tribal family contain roots, fruits and leaves. Also, it is quite interesting that, until the host offers wine to the guest, the person will not enjoy the food and the relationship may not last for long.

#### **Health Care:**

The tribal society's health care system is inextricably related to its forest resources. Since the generation, they have been practising the Desi Osho (Aurvedic medicine). Mostly they collect plants, roots, bark, fruits, leaves and flowers from various trees and plants and prepare medicines. The medicinal plants and trees are Bisalya Karani, Deobadni, Debbaru, Bana Neem, Debsanda, Patal Gorud, Muchkund, Harida, Bahada, Amla, Bela, Bon Tulsi, Ghoda Tulsi, etc., and flowers of different types, i.e., Sonari, Armal, Kaubonda, Simli, Etila etc., and roots and bark from the trees of Bagha Naki, Kalaja, Siadi, Muniga, Sonari, Duma Joda, Mango, Sandalwood etc. The positive part of the tribal people is that, generally they do not suffer from common diseases

because the food habit pattern of the tribal people contains various forest products, which are nutritious and protect them from various diseases.

#### **D. Commercial Purpose:**

Tribal people used to sell seasonal forest products in the weekly market to meet their domestic expenses. Traditionally, they would collect forest products for their use and then sell the excess at the market. They sell other products, i.e., Badni, Jhati, Siadi potra, various fruits, roots, etc.

## **7 Conclusion**

Forest has become an important source of revenue for the country. As a result, the commercial exploitation of forest resources has increased for a long period. For the vast majority of the tribal population, the forest is one of the main sources of subsistence and it is mainly through the minor forest products. However given the various restrictions and regulations imposed from time to time, their rights to collect fuel, fodder and minor forest products are very much restricted throughout India. It is well-known that there is considerable pressure from new economic policy, and forest resources have been destroyed to a large extent. The commercial exploitation of resources has resulted in the depletion of non-renewable resources which adversely affected not only the needs of the tribals but also the long-range interest of the nation. The movement of afforestation programmes, mostly those trees are planted which have commercial interest. These trees do not help the tribals as they can neither generate employment opportunities locally nor help the local people meet some of their daily demands and for their livelihood. Again, such an afforestation programme with mono-tree can also adversely affect the ecology at the local level. The commercial aspect should not be overlooked, but this should not be done at the cost of the tribals, the economy of whom largely depends on forests.

In the study area Koraput district is a notable example of an Odisha state having multiple development projects valued at millions of crores of rupees. These projects include large irrigation and hydroelectricity projects at Kolab and Machkund, the alumina plant at Damanjodi, the paper mills at Jeypore, the railway connectivity projects, the recently initiated Kodingamali Bauxite mining project in Laxmipur Tahasil, numerous small-scale industries, and many others. Despite all these developments, the indigenous people in the area are still as backwards as it was several decades before. In the district, certain tribal development initiatives have been implemented for a considerable amount of time by the government and private organizations. Despite hundreds of crores of rupees being spent on their development the economic status of these people has not transformed substantially. The abuse of tribal people by private contractors and businessmen is widely manifested. The exploitative nature of development activities never stops in the destruction of the forest's richness. Thus, forest resources are severely harmed, to the disadvantage of

tribal people. However, to protect forests, the government has classified more forest areas as restricted; this has decreased the quantity of forest land that is available for the collection of forest products by tribal people. The ongoing shortages of food, fuel, fodder, and raw materials have forced the tribal people to work as menial workers. Despite the plentiful natural resources in the Koraput district, these undeveloped tribal people are used as cheap labour by private contractors, businesspeople, and industrialists. The local tribal are falling behind the development activities because they either don't fit in with the current economy or they do so only as cheap labour that is usually bonded and therefore getting exploited.

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