

### ROLE OF MINOR FOREST PRODUCES (MFP<sub>s</sub>) IN THE LIVELIHOOD OF TRIBALS. (WITH SPECIAL REFERENCE TO KOTA BLOCK OF BILASPUR DISTRICT IN CHHATTISGARH)

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#### Abstract

The present study is an effort towards to understand the livelihood status of tribals through the collection and production of minor forest produces (MFP). Forests provide a means of survival to a large population, mainly the tribes who completely depend on forests for their livelihood. Most of the tribes are closely related to forests for their shelter and basic needs. The tribes which are known to live in forests are laborious. They directly depend on natural products for their income, living and employment. The main aim of the paper is to analyse the role minor forest produce in income and employment for tribes and to know the other sources of income and employment for tribes. The study is carried out in Kota block of Bilaspur district in Chhattisgarh state. This study is based upon primary data obtained by well-prepared questionnaire through field survey. Multistage sampling method has been used for the selection of the sample. Kota block is selected purposively and 50-50 households were selected through stratified random sampling each of from forested region and non-forested region. The present study reveals that the bamboo products (broom and basket) and mahua flower, Sal seed etc. are main sources for tribal livelihood in forested region and Tendu leaves and making Dona-Pattal (Leave Plates) are the main source of income in non-forested region.

Keywords: Tribes, Livelihood, MFPs, Forested and Non-Forested Villages.

### **INTRODUCTION**

Minor Forest Products (MFPs) play a crucial role in the lives of tribal communities, contributing significantly to their income and employment status. These products are derived from non-timber forest resources and include a wide range of goods such as fruits, nuts, seeds, herbs, resins, honey, and other non-wood forest products. The utilization of MFPs has been an integral part of the traditional livelihoods of tribal communities, who often inhabit forested areas and have a deep connection with the surrounding ecosystems. MFPs serve as a vital source of income for tribal communities. These products are collected, processed, and traded by tribal households, providing them with economic sustenance. The sale of MFPs in local markets or through various value chains contributes to the economic well-being of tribal families, helping them meet their basic needs and improve their overall standard of living. The diverse range of MFPs allows for income diversification among tribal communities. They are not reliant on a single product, and the collection and sale of various MFPs provide a buffer against market fluctuations or the variability of natural resources. Collection, processing, and marketing of MFPs generate employment opportunities for tribal communities. This

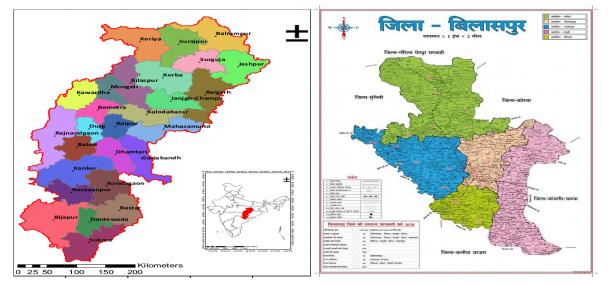




involvement spans across various activities such as harvesting, sorting, cleaning, processing, packaging, and transportation. Women often play a crucial role in the collection and processing of MFPs, contributing to their empowerment and economic independence. The reliance on MFPs encourages sustainable harvesting practices among tribal communities. Since their livelihoods are closely linked to the health of the forests, there is an inherent interest in preserving and responsibly managing the natural resources. MFPs are often deeply embedded in the cultural practices and traditions of tribal communities. The knowledge of identifying, collecting, and processing these products is traditionally passed down through generations, reinforcing cultural ties to the land. The economic value attached to MFPs provides an incentive for tribal communities to actively participate in the conservation of biodiversity. They become stewards of the forests, ensuring sustainable resource use for the long term. The role of Minor Forest Produces in the income and employment status of tribals is multifaceted. Beyond economic contributions, MFPs also contribute to the cultural identity, social fabric, and environmental sustainability of tribal communities, making them an integral aspect of their livelihoods. Recognizing and supporting the sustainable utilization of these resources is essential for the overall well-being of these communities and the conservation of our natural ecosystems.

#### Study Area

The study is carried out in Kota block of Bilaspur district in Chhattisgarh state. Kota block is both tribal dominated and most forested region of the Bilaspur district.



Source- Govt. of Chhattisgarh Website.https://chhattisgarh.gov.in/en/about-district/map-of-district

### Objectives

- 1. To study the income and employment status of tribals through forest produces.
- 2. To examine the other sources of income and employment for tribals.





#### **REVIEW OF LITERATURE**

**Chandramohan, B.P. (n.d.)** the study explores the ecological consequences of commercializing forest products and the challenges to sustainable extraction arising from shifts in tribal culture. The research reveals that many tropical species face extinction due to the commercialization, and the transition from traditional substance agriculture to commercial exploitation poses a significant threat to forest ecosystem sustainability. The study suggests that a stable tribal culture in high biodiversity forests hinders commercial exploitation, while changes in tribal culture, such as limited biodiversity, high population densities, and clustered dwelling patterns, simplify the exploitation of the forest. The younger tribal population is no longer reliant on the forest for their livelihood, as they explore opportunities outside the forest. However, assessing the impact of commercialization on tribal culture and ecosystem sustainability is complex, given the intricate connections between commercialization, changes in tribal culture, and ecosystem sustainability.

**Dolui Gour (2004)** this study highlights the critical role of non-timber forest products (NTFPs) in tribal livelihoods, providing food and income. The study emphasizes the necessity of protecting NTFPs and promoting the regeneration of plant species that produce them due to the decreasing forest coverage and declining NTFP quality. The traditional ecological knowledge of the Santal community can aid in sustainable NTFP utilization. Although modern opportunities exist, tribal people's traditional knowledge and NTFP utilization can inform conservation strategies. NTFPs are gaining market importance, offering income opportunities. Systematic NTFP harvesting and modern technology can enhance utilization and contribute to forest conservation and environmental protection.

Hlaing Zar Chi et. all (2017) The study demonstrates that natural forests in the Katha District are vital for rural livelihoods, serving as a primary income source. To reduce forest dependency, institutional arrangements and non-forest job opportunities should be explored. Factors like smaller land holdings, lower education, and low income contribute to higher forest reliance. The findings recommend integrating training programs like agroforestry and value-added forest product utilization into the district's forest management plan. Policymakers should involve local communities in conservation efforts. Future research could focus on gender-specific forest dependence, non-consumptive resource use economics, and rural willingness to engage in forest conservation.

**Islam M.A. and Quli S.M.S. (2017)** this study emphasizes the vital role of non-timber forest products (NTFPs) in rural livelihoods, poverty reduction, biodiversity conservation, and economic growth. NTFPs are crucial for health and nutrition, especially in developing countries. In India, NTFPs contribute significantly to forest revenues and employment, benefiting over 500 million people and providing a substantial portion of household income. Tribal communities heavily depend on NTFPs, which include fuel, fodder, food, medicines, and more. However, modernization and unsustainable development have caused a decline in NTFPs, impacting the livelihoods of these communities. Understanding the reliance on NTFPs among tribal communities can help policymakers develop effective strategies for poverty reduction, livelihood improvement, conservation, and sustainable NTFP use. This research





aims to quantify and analyse the diversity of NTFPs and their contribution to the livelihoods of tribal households in Jharkhand, India.

**Kumar Sathees N.S. and Jayashree P. (2014)** Non-Timber Forest Products (NTFPs) hold significant importance in both national and local economies. In India, for instance, NTFP-related activities provide employment for over 30 million people, and more than 50 million depend on NTFPs for subsistence and cash income, with NTFPs contributing to 50% of household income for 20-30% of the rural population, particularly tribal communities. The conservation of forest resources has become a major challenge in India, including the state of Karnataka, due to increasing pressures on dwindling forest reserves. Karnataka, located in South India, covers a vast area, and boasts diverse forests, including the Western Ghats, a recognized global biodiversity hotspot. These forests are home to a rich array of flora and fauna, including endemic species. Karnataka's forests support 25% of the country's elephant population and 10% of its tiger population, along with numerous other wildlife species. The state's forests are vital for biodiversity and ecosystem conservation.

Satpati, Sandip and Sharma, K. K. (2021) the livelihoods in West Bengal's southwestern plateau, primarily based on subsistence agriculture and natural resource extraction, face challenges such as seasonal migration due to insufficient output in Very Low Livelihood Resource Regions (VLLRR). Landless individuals aged 30 to 45 often migrate during specific crop seasons, driven by factors like inadequate irrigation and forest degradation. Inequality in livelihood capital distribution leads to labour migration and livelihood insecurity, reflected in the declining Livelihood Options Index from High Livelihood Resource Region (HLRR) to VLLRR. To address these challenges, the government is advised to implement policies promoting wage employment, rural development, and support for the tribal population. Recommendations include establishing Regional Resource Centres (RRC), land redistribution, and participatory forest management reforms. Initiatives such as primary collection centres for Non-Timber Forest Products (NTFPs), granting long-term forest land access to tribal dwellers, and capacity-building efforts are proposed. Ensuring electricity access for tribal households, especially for Below Poverty Line (BPL) families, is crucial for educational equity. The health sector, particularly for women and children, requires attention, with proposals for deploying health activists. Overall, achieving livelihood security among tribals necessitates comprehensive measures in economic, environmental, and social aspects.

**Shrey Ravi et. all (2017)** in their paper investigates the collection, consumption, and selling of major Non-Timber Forest Products (NTFPs) by forest-dwelling tribes in Chhattisgarh. It found that on average, 1110.22 Kg of NTFPs were collected, with only 5.02% consumed, and the rest sold. Sal seed was the most collected NTFP at 29.31%, followed by Mahua flower (28.89%) and Tamarind (13.07%), while Honey had the lowest share at 0.75%. The study also showed that 53.44% of the sold NTFPs were traded to the Minor Forest Produce Society, 35.15% to village merchants, and 11.41% sold directly to consumers, totalling 1054.43 Kg for Chhattisgarh. This research has significance for policymakers and economists in formulating NTFP marketing policies to increase producers' profitability. It highlights that farmers profit from NTFPs without cultivation, and the state government's involvement plays a key role.





Further research is needed to assess NTFP revenues in other protected areas and understand their socio-economic impact on poverty alleviation and wildlife conservation.

**Shylajan C. S. and Mythili G. (2017)** This study investigates the factors influencing local people's dependence on a protected forest area in Kerala, confirming that providing alternative income sources can reduce dependence and ease conflicts between local interests and forest conservation. The study also raises concerns about the institutional mechanisms for marketing and managing non-wood forest products. It highlights significant price differences between gatherers and final retail prices. To encourage sustainable extraction and cooperation in conservation, it suggests ensuring fair compensation to local people and combining traditional knowledge with commercial ventures to share benefits effectively.

**Soren Phulamani and Chandra Naik Iswar (2020)** in their study emphasizes the vital role of non-timber forest products (NTFPs) in sustaining tribal livelihoods, meeting daily needs, and supporting economic development. It reveals that tribal communities collect and sell NTFPs, which provide food, shelter materials, medicine, and cultural value, often at local markets. Tribal people typically carry NTFPs on their heads or bicycles to reduce transport costs. To improve their livelihoods, the study suggests establishing robust NTFP markets with fair prices. Government support for self-help groups or encouraging small enterprises like paper plate or cup factories is also recommended to reduce dependence on traders and enhance economic opportunities.

### METHODOLOGY

*Selection of the Study Area-* The study includes Kota block of Bilaspur district in the Chhattisgarh state as its research area. Bilaspur district is selected conveniently further out of 4 blocks of district the Kota block is selected randomly. Moreover, for the relative study of the data the block is bifurcated into two regions forested and non-forested regions respectively and 5-5 villages from each selected randomly (Table-1). Finally, the data were taken from households conveniently.

Sr. No.	Region	Villages	No. of Households
1.	Forested Region	Kurdar, Ourapani, Umariya, Parasapani, Pahanda	50
2.	Non-Forested Region	Khaira, Chapora, Baridih, Parsada, Navagaon.	50

Table 1: Sampled villages in the Kota block of Bilaspur district.

Source- Primary Data

*Sample Size-* The sum of 100 households were taken for this purpose i.e., 50-50 households from forested and non-forested regions from each.

*Methods-* The present paper is based on primary data. The data is obtained through well prepared questionnaire by personal interview. The data were presented through tabulation and graphical method and for the analysis of the data various mathematical and statistical methods are used like percentages, averages and means etc.





#### **RESULTS AND DISCUSSION**

In the study area, tribals collect Minor Forest Produces (MFPs) mainly to fulfil their basic needs. Over time, these MFPs have gained value in trade, leading to increased income due to growing demand. The trade in MFPs can encourage the protection of forests by offering a source of income from resources that might not seem financially valuable at first. However, it is important to note that these MFPs are crucial for the livelihoods of tribal communities residing in remote and dense forest areas. Despite the commercial aspect, these products remain essential for the daily lives of tribal forest dwellers. Considering this context, the paper aims to describe various aspects, including the collection, consumption, selling, income, and employment generation MFPs by forest-dwelling tribes. The goal is to understand how these activities impact the lives of tribal communities and contribute to the conservation of forests.

#### Collection and Production of the MFPs in the Forested Region

The table-2 provides information about the various minor forest products, the methods of collection, the seasons in which they are collected, the average weekly collection or production by a household, and the daily active working hours associated with each product. It seems to be a snapshot of the practices in forested villages related to the utilization of these minor forest products. Bamboos are collected by cutting them throughout the year. Baskets, known as Jhauha, are crafted by making use of bamboo. On average, a household produces 20.8 units per week, investing approximately 6.25 hours daily in this activity. Two types of brooms are produced – thin and thick. The quantities produced are 17.86 units and 29.8 units per week, respectively. Mahua flowers are gathered during the winter season. On average, a household collects 90.74 kg per week, investing approximately 3.5 hours daily. Sal seeds are gathered during the summer season. On average, a household collects 47.6 kg per week, investing approximately 2.75 hours daily. Mushrooms are gathered during the monsoon season. On average, a household collects 1010 bundles per week, investing approximately 5.15 hours daily.

Sr. No.	Products	How Collected	Season	Collection/Production of a Household (Weekly)	Active Working Hours (Daily)
1.	Bamboo Products	Cutting			-
Ι	Jhauha (Basket)	Making		20.8 (In Units)	
II	Kharhata (Broom)-	Through	Every		
i	Thin	Bamboo	Season	17.86 (In Units)	6.25
ii	Thick			29.8 (In Units)	
2.	Mahua Flower	Gathering	Winter	90.74 (In Kg.)	3.5
3.	Sal Seed	Gathering	Summer	47.6 (In Kg.)	2.75
4.	Mushrooms	Gathering	Monsoon	7.8 (In Kg.)	3.12
5.	Tendu Leaves	Plucking	Summer	1010 (In Bundles)	5.15

Table 2: Average household minor forest product collection and production in Forested
villages.

Source-Primary Data





# Overall average collection, production, consumption, selling of MFPs in the Forested Region

Table-3 presents a comprehensive overview of the minor forest products in the Kota block of Bilaspur district, emphasizing the quantity collected, consumed, and sold during a specified season in forested villages. Specifically, Jhauha, denoting baskets, is produced in a quantity of 481.92 units. Among these, 3 units are utilized for consumption, while the remaining 478.92 units are sold at Rs. 25 per unit, resulting in a total income of Rs. 11,973. Thin Kharhata brooms are manufactured in a quantity of 428.64 units, with 2 units being consumed. The remaining 426.64 units are sold at Rs. 10 per unit, generating an income of Rs. 4,266.4. Thick Kharhata brooms have a production volume of 715.2 units, of which 3 units are consumed, and the rest, 713.2 units, are sold at Rs. 8 per unit, yielding an income of Rs. 5,705.6. Additionally, Mahua flowers are gathered in a quantity of 725.56 kg. Of this, 5 kg are consumed, and the remaining 720.56 kg are sold at Rs. 25 per kg, resulting in an income of Rs. 18,014. Sal seeds, totalling 374.4 kg, are entirely sold at Rs. 20 per kg, generating an income of Rs. 7,488, as none are consumed. Overall, the table intricately details the production, consumption, and income generation for each minor forest product, offering insights into the economic dynamics of the region during the specified season.

Table 3: Overall average collection, production, consumption and selling of minor forest
produce in Kota block of Bilaspur district in a season. (Forested Villages)

Sr. No.	Products	Quantity Collected/Produced	Quantity Consumed	Quantity Sold	Price Per Unit (In Rs.)	Income generated (In Rs.)
1.	Jhauha (Basket)	481.92 (In Units)	3	478.92	25	11,973
2.	Kharhata (Thin)	428.64 (In Units)	2	426.64	10	4,266.4
3.	Kharhata (Thick)	715.2 (In Units)	3	713.2	8	5,705.6
4.	Mahua Flower	725.56 (In Kg.)	5	720.56	25	18,014
5.	Sal Seed	374.4 (In Kg.)	0	374.4	20	7,488
6.	Mushrooms	56.64 (In Kg.)	3.5	53.14	300	15,942
7.	Tendu Leaves	4040 (In Bundles)	0	4040	4	16,160
Total						79,549

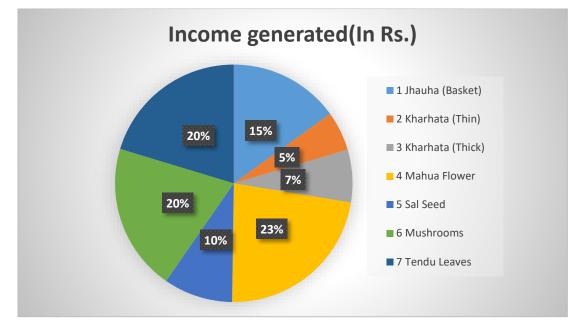
Source-Primary Data

### **Income generation through MFPs**

The following pie chart illustrates the percentage contribution of various products to the total income of Rs. 79,549 in the given context. Jhauha (Basket) accounts for 15.05% of the income, followed by Kharhata (Thin) at 5.36% and Kharhata (Thick) at 7.17%. Mahua Flower makes a significant contribution of 22.65%, while Sal Seed contributes 9.41%. Mushrooms and Tendu Leaves contribute 20.04% and 20.31%, respectively. Each product's percentage is calculated relative to the total income, providing a clear representation of their individual financial impact.







#### Role of other sources in livelihood

The table-4 presents a detailed overview of employment statistics from two distinct sources, namely the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) and the Forest Department. Through MNREGA, individuals are employed for a period ranging from 100 to 150 days, with an average of 78.6 working days. The wage rate stands at Rs. 170 per day, resulting in a total income of Rs. 13,270.2. On the other hand, employment through the Forest Department spans 50 to 60 days, with an average of 45.58 working days. The wage rate for this source is Rs. 300 per day, contributing to a total income of Rs. 13,674. Cumulatively, the income generated through both MNREGA and the Forest Department amounts to Rs. 26,944.2. This data provides a comprehensive insight into the employment landscape, offering valuable information on the duration of employment, average working days, wage rates, and total income derived from these two significant sources in the specified context.

Sr. No.	Sources	No. of Days Employed	Average working Days	Wage Rate (In Rs.)	Income (In Rs.)
1.	Trough MNAREGA	100-150	78.6	170	13,270.2
2.	Through Forest Department	50-60	45.58	300	13,674
Total					26,944.2

Source-Primary Data

### **MFPs In Non-Forested Region**

The table-5 elucidates the intricate dynamics of household engagement in the collection and production of diverse forest products. The methods of collection, seasonal considerations, weekly productivity per household, and the daily commitment of active working hours are





systematically outlined. Bamboo products, acquired through cutting, are a perennial activity, averaging 5.75 collections weekly. This encompasses the creation of Supa (6.24 units weekly) and Tukna (9.92 units weekly). Leaf plates, obtained through plucking, constitute a year-round pursuit, resulting in a weekly output of 4.25 collections per household. Noteworthy is the manufacturing of Dona (2848 units weekly) and Pattal (3284 units weekly). Charota seeds are gathered, contributing to a weekly total of 21.6 kg, involving a daily labour commitment of 2.12 hours. In the case of Tendu leaves, plucking occurs exclusively during the summer season, with an average weekly yield of 1231 bundles, demanding 6.56 hours of daily effort. This detailed exposition provides valuable insights into the diverse spectrum of forest product activities, their seasonal nuances, and the labour investment required by households in the specified context.

 Table 5: Average household minor forest product collection and production in non-forested villages.

Sr. No.	Products	How Collected	Season	Collection/Production of a Household (Weekly)	Active Working Hours (Daily)
1.	Bamboo Products-	Cutting			
Ι	Supa	Making	Every	6.24 (In Units)	5.75
II	Tukna	Through Bamboo	Season	9.92(In Units)	
2	Leave Plates-	Plucking			
Ι	Dona	Making	Every	2848(In Units)	4.25
II	Pattal	Through Leaves	Season	3284(In Units)	4.23
4.	Charota Seed	Gathering		21.6 (In Kg.)	2.12
5.	Tendu Leaves	Plucking	Summer	1231(In Bundles)	6.56

Source-Primary Data

# Overall average collection, production, consumption, selling of MFPs in the non-forested region

The table-6 comprehensively outlines the quantities of various forest products, encompassing production, consumption, and sales, along with associated financial details. Notably, Supa, a bamboo product, sees a production of 149.76 units, with 2 units consumed and the rest sold at Rs. 70 per unit, resulting in an income of Rs. 10,343.2. Tukna, another bamboo product, has a production of 238.8 units, with 5 units consumed, and the remaining 233.8 units sold at Rs. 30 per unit, generating an income of Rs. 7,164. Leaf plates, specifically Dona and Pattal, are produced in substantial quantities (68,325 and 78,816 units, respectively), with no consumption and are sold at Rs. 60 and Rs. 50 per unit, resulting in incomes of Rs. 4,099.5 and Rs. 3,940.8, respectively. Charota seeds, totalling 86.4 kg, are entirely sold at Rs. 12 per kg, generating an income of Rs. 1,036.8. Additionally, Tendu leaves, gathered in 4,924 bundles, are sold at Rs. 4 per bundle, contributing significantly to the total income of Rs. 19,696. The cumulative income from the sale of these forest products amounts to Rs. 46,280.3, reflecting the economic dynamics of production and sales in the specified context.





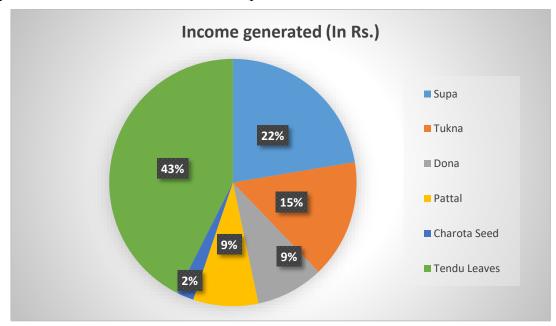
Sr. No.	Products	Quantity Collected/Produced	Quantity Consumed	Quantity Sold	Price Per Unit (In Rs.)	Income generated (In Rs.)
1.	Supa	149.76 (In Units)	2	147.76	70	10,343.2
2.	Tukna	238.8 (In Units)	5	233.8	30	7,164
3.	Dona	68,325 (In Units)	0	68,325	60*	4,099.5
4.	Pattal	78,816 (In Units)	0	78,816	50*	3,940.8
5.	Charota Seed	86.4 (In Kg.)	0	86.4	12	1,036.8
6.	Tendu Leaves	4,924(In Bundles)	0	4,924	4	19,696
Total						

### Table 6: Overall average collection, production, consumption and selling of minor forest produce in Kota block of Bilaspur district in a season. (non-Forested Villages)

\*Price of 1000 units. Source-Primary Data

#### **Income generation through MFPs**

The table provides a concise yet insightful overview of the income generated and the percentage contribution of various forest products. Supa, a bamboo product, leads the chart with an income of Rs. 10,343, constituting 22% of the total. Tukna, another bamboo product, follows closely with an income of Rs. 7,164, contributing 15% to the total. Dona and Pattal, both leaf plates, generate incomes of Rs. 4,099.50 and Rs. 3,941, respectively, each representing 9% of the total. Charota seeds contribute Rs. 1,037, making up 2% of the total income. Tendu leaves emerge as a significant contributor, generating an income of Rs. 19,696 and constituting the largest share at 43%. This table succinctly captures the financial distribution of income across diverse forest products, offering a clear insight into their respective economic contributions in the specified context.







#### **Role of other sources in livelihood**

The table shows details about jobs and income from two sources: the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) and agricultural work. People working through MNREGA get employed for 100 days on average, working around 44.6 days. They earn Rs. 170 per day, resulting in a total income of Rs. 7,582. For agricultural labour, people work around 10 to 15 days, averaging 13 days, earning Rs. 150 per day and totalling Rs. 1,950. Altogether, the combined income from both sources is Rs. 9,532. This table gives a simple picture of how long people work, what they earn each day, and the total income from both MNREGA and agricultural labour in the given context.

Table 7: Other sources of employment and income in non-forested villages.

Sr. No.	Sources	No. of Days Employed	Average working Days	Wage Rate (In Rs.)	Income (In Rs.)
1.	Trough MNAREGA	100	44.6	170	7,582
2.	Agricultural Labourer	10-15	13	150	1,950
Total					9,532

Source-Primary Data

#### CONCLUSION

The study investigates the role of Minor Forest Products (MFPs) in the livelihood of tribals in the Kota block of Bilaspur district in Chhattisgarh. The research focuses on the collection and production of MFPs, emphasizing their significance for tribal communities. Tribes, closely connected to forests, depend on natural products for income, living, and employment. The paper aims to analyse the role of MFPs in income and employment, considering forested and non-forested regions. The study reveals that bamboo products, mahua flowers, Sal seeds, and Tendu leaves are essential for tribal livelihoods, varying between forested and non-forested regions. Additionally, the research explores other sources of income, including employment through the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) and the Forest Department. Thus, the study reveals that whether it is forested or non-forested region MFPs plays a major role as source of income, employment and the livelihoods, MFPs, and external sources of income, providing a comprehensive understanding of the economic dynamics in the specified context.

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