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An Economic Overview of Non-Timber Forest Products (NTFPs) in Chhattisgarh: Challenges and Opportunities

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Abstract

Non-Timber Forest Products (NTFPs) encompass all valuable biological resources obtained from forests, excluding timber, including edible items such as fruits and mushrooms, medicinal plants, fibres, and culturally significant materials. They play a vital role in supporting rural livelihoods, ensuring food security, sustaining traditional practices, and promoting sustainable forest use. Products like tendu leaves, mahua flowers, and lac illustrate their economic and ecological significance. Chhattisgarh, endowed with dense forest cover and rich biodiversity, is a significant hub for NTFPs. Major tribal communities of Chhattisgarh, including Gond, Baiga, Halba, Kanwar, Kamar, Birhor, and Oraon, rely on the collection and marketing of NTFPs such as tendu leaves, mahua, sal seeds, lac, bamboo, chironji, honey, amla, and harra-behera as their primary source of income, while these products also hold deep cultural and traditional value. This study seeks to overview economic aspects of NTFPs in Chhattisgarh and aims to examine the associated opportunities and challenges for sustainable development.

Keywords: Chhattisgarh, Economy, Livelihood, Marketing, NTFPs, Socio-Economic, Tribes.

1. Introduction

Non-Timber Forest Products (NTFPs) encompass a diverse range of biological resources derived from forests (both plant and animal) that, despite their substantial economic and ecological value, are largely excluded from formal national accounts. Historically, NTFPs have served multifaceted roles, providing essential sustenance in the form of food and fodder, supporting traditional healthcare systems through medicinal plants, supplying raw materials for construction and artisanal crafts, and sustaining cultural and spiritual practices. Their significance extends far beyond utilitarian purposes, being deeply embedded in indigenous knowledge systems and socio-cultural traditions, and serving as a cornerstone of community identity and livelihood security (Talukdar et al., 2021).

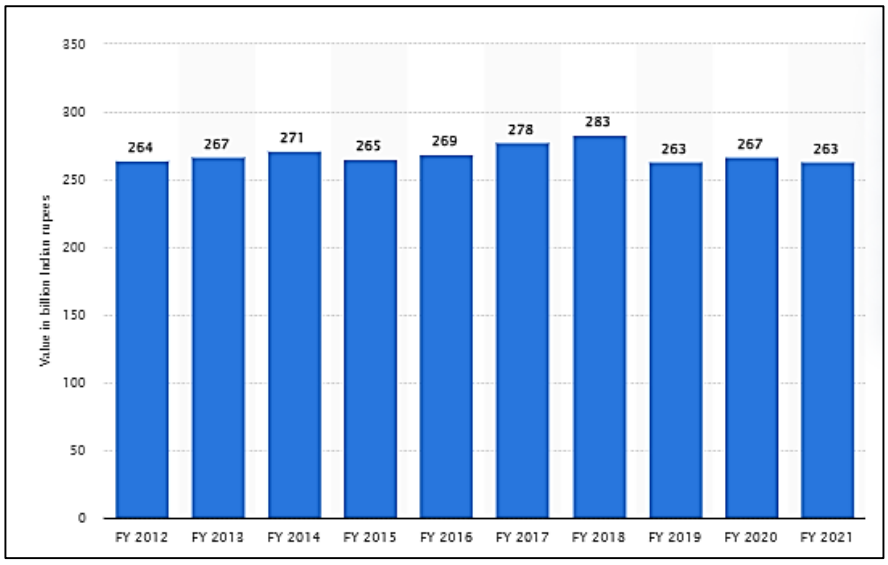


Figure 01: Gross value added from non-timber forest products across India from financial year 2012 to 2021(in billion Indian rupees)

Source: https://www.statista.com/statistics/1083252/india-economic-contribution-of-non-timber-forest-products/

India is endowed with a rich diversity of Non-Timber Forest Products (NTFPs), which serve as a cornerstone of rural economic resilience, particularly for forest-dependent communities. As evidenced by the data presented (Figure 01), NTFPs have demonstrated remarkable economic stability, contributing between ₹263 to ₹283 billion annually to India's Gross Value Added (GVA) from FY 2012 to FY 2021. This consistent performance despite minor interannual fluctuations highlights their enduring significance as a buffer against poverty and a catalyst for livelihood security.

The development of NTFP-based enterprises presents considerable potential for enhancing sustainable livelihoods, fostering local entrepreneurship, and contributing to ecological conservation (Hazari et al., 2023). Within this national context, Chhattisgarh emerges as a prominent hub for NTFPs, owing to its extensive forest cover, rich biodiversity, and the presence of over 200 commercially and culturally valuable species. Key NTFPs from the state include tendu leaves, mahua flowers and seeds, sal seeds, tamarind, harra, amla, baheda, and chironji seeds, products that serve as essential raw materials for industries such as pharmaceuticals, food processing, and cosmetics. Mahua, for instance, is central to edible oil production and traditional liquor making, while tendu leaves are indispensable in bidi manufacturing. Value-addition initiatives, such as Bastar Se Bazaar Tak, further highlight the economic potential of NTFPs by processing custard apple, mango, and tamarind into high-demand commodities like amchur, fenugreek powder, and medicinal blends, thereby catering to both rural and urban markets (Sharma, 2024).

A significant proportion of Chhattisgarh's tribal population depends heavily on NTFPs for subsistence, income, and cultural continuity. The Gond, the state's largest tribal group, collect tendu leaves, mahua flowers and seeds, lac, sal seeds, harra-behera, and chironji, while sub-groups such as the Maria Gond in Bastar also gather bamboo, resin, tamarind, and wild fruits, and produce mahua-based beverages of cultural significance. The Baiga are well-known for their traditional herbal medicinal practices, utilizing amla, honey, harra, char, and tamarind. Kanwar communities harvest mahua, tendu, chironji, jackfruit

seeds, and lac, whereas the Halba collect tamarind, bamboo, mushrooms, mahua, and wild fruits, and also engage in bamboo handicrafts. Particularly Vulnerable Tribal Groups (PVTGs) like the Kamar and Birhor sustain their livelihoods through honey collection, bamboo basketry, sal seed gathering, and tendu leaf collection. The Oraon similarly rely on mahua, sal seeds, harra-behera, tamarind, and lac. For these communities, NTFPs are not only critical economic assets but also integral to their cultural heritage, traditional knowledge, and social cohesion.

This study endeavors to provide an in-depth assessment of the economic prospects of key Non-Timber Forest Products (NTFPs) in Chhattisgarh, with a particular focus on identifying opportunities and challenges that limit their sustainable and effective utilization.

Review of Literature:

(Pandey et al., 2016) The authors highlight that Non-Timber Forest Products (NTFPs) are vital for rural, tribal, and forest-dependent communities, contributing to income, nutrition, and food security, though their value varies by ecology, season, and income level. Their sustainable use is threatened by poor harvesting practices, habitat loss, rising demand, and weak policies. The authors call for stronger policy frameworks, domestication, better harvesting and processing methods, and targeted interventions in storage, grading, and value addition, alongside empowering communities with market and policy knowledge to improve livelihoods and returns.

(Gupta et al., 2018) The study in Bilaspur district of Chhattisgarh found that several NTFPs were collected seasonally, with mahua emerging as the most prominent both in collection and income contribution. NTFP sales provided significant annual earnings and served as a major source of seasonal employment, with mahua offering the highest number of workdays per family. Analysis also showed that certain socio-economic factors were closely linked to employment generation through NTFPs. Overall, the findings emphasize the crucial role of NTFPs in livelihood security, income generation, and employment opportunities, contributing significantly to the economic empowerment of tribal communities in the region.

(Churpal et al., 2021) This study evaluates the costs, returns, and market dynamics of non-timber forest products (NTFPs) in Chhattisgarh, revealing their vital role in sustaining tribal livelihoods through products like mahua flowers, tendu leaves, and sal seeds. It examines household collection expenses, wages, and market prices, highlighting NTFPs as key income sources and incentives for forest conservation. Regional variations in costs, income, and yield underscore the need for location-specific policies to enhance livelihoods and promote sustainable forest management.

(Tamrakar et al., 2023) This paper examines the vital role of non-timber forest products (NTFPs) in sustaining tribal livelihoods in Chhattisgarh's Kondagaon Forest Division. It highlights how ecological, climatic, market, and policy factors, including the MSP scheme, shape NTFP collection and production. The study underscores the need for continuous monitoring, adaptive management, and sustainable practices to balance economic growth with forest conservation, ensuring long-term resource viability and improved tribal well-being.

Objectives of the Study: The objective of this study is to provide an overview of the production and economic dimensions of Key Non-Timber Forest Products (NTFPs) in Chhattisgarh. It seeks to analyze available production and market data, assess their contribution to local livelihoods and regional economy, and identify the key opportunities and challenges that influence their sustainable utilization and future prospects.

Research Methodology: This study employs a descriptive research design and draws primarily on secondary data to investigate the economic and production aspects of Non-Timber Forest Products (NTFPs) in Chhattisgarh. Sales and production statistics were obtained from the Chhattisgarh State Minor Forest Produce (Trading & Development) Co-operative Federation Ltd., supplemented by information from peer-reviewed journals, government and non-governmental organization reports, newspaper articles, and publications from both private and public institutions. Data analysis and visualization were conducted using Microsoft Excel. This methodological approach facilitated a comprehensive examination of the subject by integrating diverse sources of evidence and perspectives.

Economic Overview of Key NFTPs in Chhattisgarh

Tendu Leaves: Chhattisgarh is a leading producer of Tendu (Diospyros melanoxylon) leaves, a key Non-Timber Forest Product (NTFP) used as wrappers for beedis, contributing about 16.72 lakh standard bags annually—nearly 20% of India's total. The collection season runs from late April to early June, starting earlier in southern districts. In 2004, the state government introduced a major policy shift by advancing the sale of green leaves instead of storing them, ensuring better prices, timely payments to collectors, and improved trade efficiency. The system is managed through 31 District Unions and 902 Primary Co-operative Societies under the State Minor Forest Produce Federation, with societies overseeing collection and wage disbursement, while purchasers handle processing, transport, and storage. Collectors are issued identity cards, their collections are systematically recorded, and payments are increasingly made through banking channels. For 2025, the average sales rate stands at ₹7,025 per standard bag, making tendu leaves one of the most valuable NTFPs in Chhattisgarh, providing vital seasonal livelihood support to tribal and rural communities while strengthening the state's forest-based economy.

The year-wise details of Collection and Sale of Tendu leaves in the State (2001-2025)

Figure 02: Tendu Leaves Collected Quantity (2001-2025)

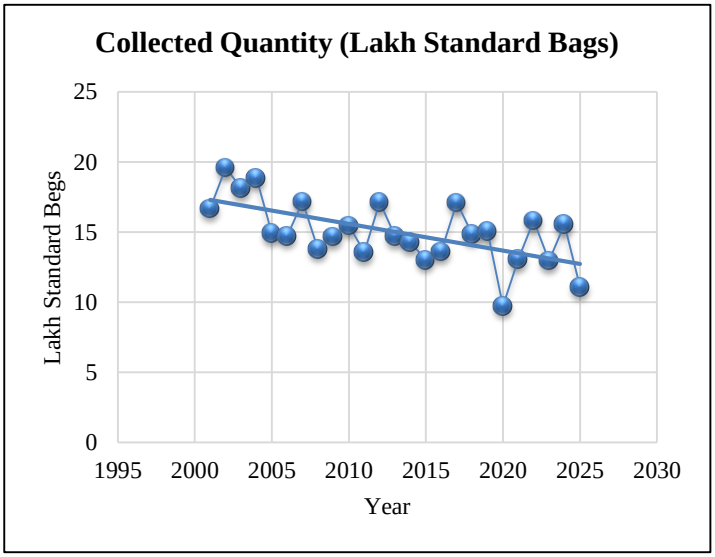


Figure 03: Tendu Leaves Sales Value (2001-2025)

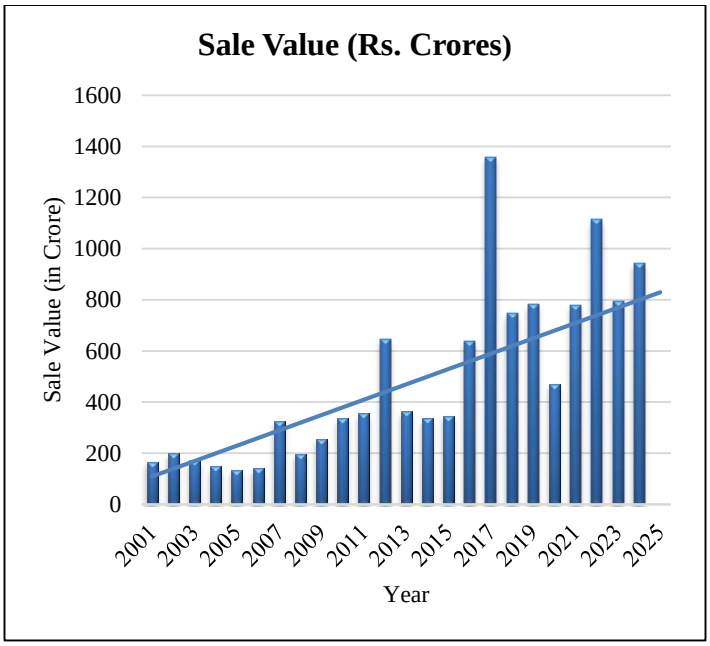


Table 01: Tendu Leaves related data (2001-2025)

Table 01: Tendu Leaves related data (2001-2025)

Year	Collected Quantity (Lakh Standard Bags)	Collection Wages (Rs. Crores)	Sale Value (Rs. Crores)	Average Sale Rate (Rs. per Std. Bag)
2001	16.67	75.53	165.22	1000/-
2002	19.58	88.92	198.71	1015/-
2003	18.12	82.18	173.25	956/-
2004	18.86	84.92	148.5	787/-
2005	14.92	67.17	135.06	906/-
2006	14.72	66.31	140.02	951/-
2007	17.18	85.96	325.59	1895/-
2008	13.79	82.77	197.61	1434/-
2009	14.67	95.33	256.41	1748/-
2010	15.45	108.15	335.3	2170/-
2011	13.57	108.52	355.31	2619/-
2012	17.15	188.66	646.9	3772/-
2013	14.71	176.7	362.13	2461/-
2014	14.28	171.4	334.75	2345/-
2015	13.01	156.13	345.5	2656/-
2016	13.61	204.21	638.89	4693/-
2017	17.1	307.8	1358.7	7945/-
2018	14.85	371.15	744.97	5033/-
2019	15.05	602.14	783.34	5218/-
2020	9.73	389.15	470.23	4848/-
2021	13.06	522.2	776.35	5959/-
2022	15.83	633.26	1113.1	7040/-
2023	12.94	517.64	794.2	6138/-
2024	15.56	855.68	942.12	6056/-
2025	11.08	609.29	747.90*	7025/-

Source: https://www.cgmfpfed.org/new/tradeofNWFP_Tendu.php

Tendu leaves (Diospyros melanoxylon), a major Non-Timber Forest Product (NTFP) in Chhattisgarh, demonstrate significant economic importance for the state as well as for forest-dependent communities. The data from 2001–2025 highlights several key trends (as depicted by Table 01, Figure 02 & Figure 03).

First, the collection quantity has remained relatively stable between 13–19 lakh standard bags annually, with only a few years showing dips (e.g., 2020 due to disruptions likely caused by the pandemic). Despite this relative stability in physical output, there has been a dramatic increase in both sale value and collection wages over the years, indicating rising market demand and improved pricing mechanisms.

The average sale rate per standard bag increased sharply from ₹1,000 in 2001 to ₹7,025 in 2025, reflecting a seven-fold growth. Notably, spikes in 2012, 2016, and 2017 show years of exceptionally high price realization, with 2017 recording the peak of ₹7,945 per bag and a corresponding surge in sale value to over ₹1,358 crore. This surge underscores the policy effectiveness of advance green leaf sales (introduced in 2004) and competitive bidding processes through e-tendering and e-auctions, which significantly improved transparency and revenue. Similarly, collection wages—the direct earnings of tribal and rural leaf gatherers—rose from ₹75 crore in 2001 to ₹609 crore in 2025, highlighting the product's critical role in sustaining livelihoods. Even in years of reduced collection (e.g., 2020), wage levels remained relatively high due to increased per-unit prices, ensuring income stability for collectors. Overall, tendu leaves represent one of the most valuable NTFPs in Chhattisgarh, contributing both to the state economy and the livelihood security of forest-dependent communities. The combination of stable output, rising unit prices, and institutional reforms has transformed tendu leaf trade into a significant driver of rural income and state revenue within the minor forest produce sector.

Gums: Gums are recognized as a key Non-Timber Forest Product in Chhattisgarh and are systematically categorized for trade. Category I includes Kullu gum (Sterculia urens), graded into I, II, and III based on color, quality, and market value, while Category II comprises gums from Dhawda (Anogeissus latifolia), Babool (Acacia indica), and Khair (Acacia catechu). Annual gum production is highly variable. Collection of Kullu gum is confined to Bastar Revenue Division (including Kanker and Jagdalpur districts), and collection areas are subdivided into units for organized advance sale via e-tenders/e-auctions by the State MFP Federation, Raipur. Purchasers must deposit 10 % of the sale value as security, and they pay collectors at government-fixed rates at collection centers. This regulated trade framework supports structured commerce and provides an organized mechanism for forest-dependent collectors.

Year-wise details of the Collection and Sale of Kullu Gums in the State are as follows

Table 02: Kullu Gum related data (2001/02-2016/17)

Year	Quantity Collected (Qtls.)	Collection Wages (Rs. Lakhs)	Sale Value (Rs. Lakhs)	Average Sale Rate (Rs. per Qntl.)
Kullu Gum				
2001-02	247.52	12.38	13.17	5322
2002-03	494.6	24.73	24.99	5053
2003-04	1058.6	52.93	54.68	5168
2004-05	1283.07	82.12	85.06	6629
2005-06	676.795	62.7	68.37	10103
2006-07	435.84	58.61	65.43	15013
2007-08	1076.6	149.43	151.53	14500
2008-09	864.19	133.06	140.01	16201
2009-10	1750.14	297.48	313.33	17903
2010-11	389.68	85.73	105.34	27033

2011-12	138.5	37.4	53.79	38837
2012-13	190.89	42.87	47.29	29784
2013-14	18.4	3.73	3.34	24212
2014-15	40.27	5.27	3.5	10100
2015-16	---	---	---	---
2016-17	4	0.537	0.064	1599

Figure 04: Kullu Gum Quantity Collected (2001/02-

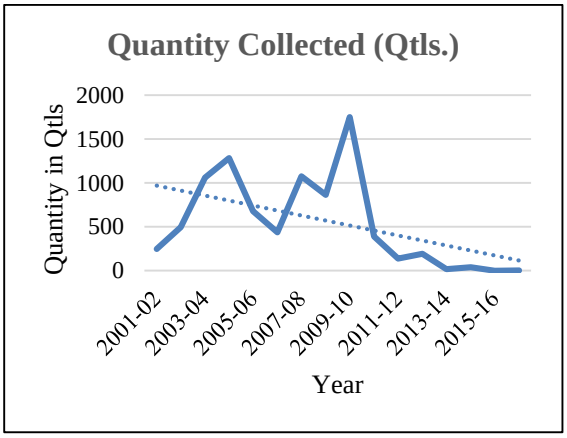
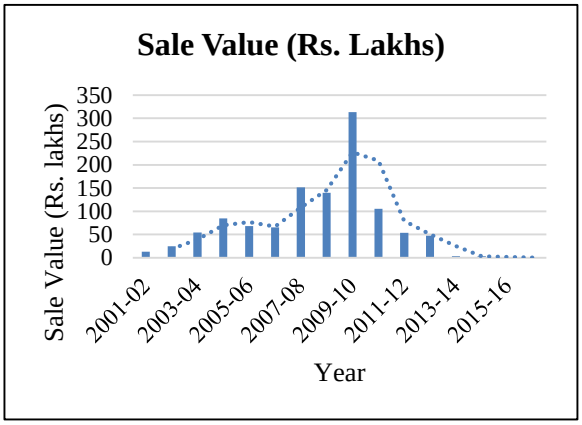


Figure 05: Sale Value of Kullu Gums (2001/02-2016/17)



Source:https://www.cgmfpfed.org/new/tradeofNWFP_Gum.php

The data spanning from 2001/02 to 2016/17 (as presented in Table 02, Figure 04, and Figure 05) highlights significant trends, with the year-wise analysis of Kullu gum collection and sales in Chhattisgarh revealing a marked divergence between production levels and market valuation. During the initial years (2002–2009), gum collection increased steadily, culminating in the highest recorded output of 1,750 quintals in 2009–10, with corresponding sales of ₹313.33 lakhs. This period also witnessed a consistent rise in the average sale rate, from ₹5,053 per quintal in 2002–03 to nearly ₹ 17,903 per quintal in 2009–10, driven by robust market demand. However, post-2010, despite a substantial escalation in average sale rates—peaking at ₹38,837 per quintal in 2011–12—the collected quantity declined drastically, falling to 138 quintals in 2011–12, 18.4 quintals in 2013–14, and merely 4 quintals by 2016–17, with negligible revenue generation. This pattern highlights a paradox wherein the market value of Kullu gum increased, but production collapsed due to over-extraction, ecological pressures, and regulatory restrictions that confined collection to limited regions such as Bastar. The trend underscores the urgent need for sustainable management practices and community-based conservation to balance livelihood potential with resource preservation.

Table 03: Dhawda/Khair/Babul Gums related data (2001/02-2016/17)

Year	Quantity Collected (Qtls.)	Collection Wages (Rs. Lakhs)	Sale Value (Rs. Lakhs)	Average Sale Rate (Rs. per Qntl.)
Dhawda/Khair/Babul Gums				
2001-02	1196.12	27.89	16.11	1749
2002-03	904.23	16.74	17.52	2622
2003-04	403.53	7.6	8.02	2639
2004-05	742.16	12.33	13.34	2704
2005-06	145	2.38	2.75	2882
2006-07	141.58	2.89	3.27	2826
2007-08	306	5.1	5.9	2893
2008-09	560	11.39	12.21	3060
2009-10	619.25	14.4	19.49	3723
2010-11	26.74	0.74	1.78	6644
2011-12	64.5	1.87	3.07	4756
2012-13	45.2	0.96	1.02	3078
2013-14	7	0.2	0.23	3302
2014-15	---	---	---	---
2015-16	---	---	---	---
2016-17	27.5	0.798	0.825	3000

Figure 06: Dhawda/Khair/Babul Gum Quantity Collected (2001/02-2016/17)

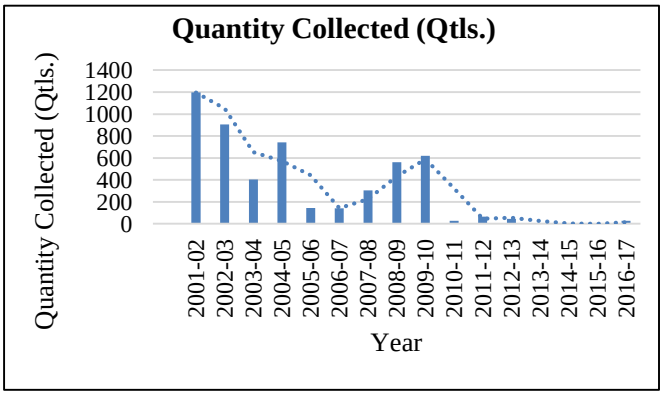
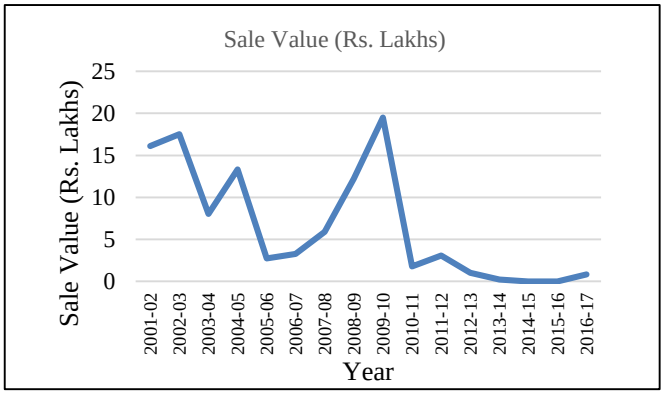


Figure 07: Sale Value of Dhawda/Khair/Babul Gum (2001/02-2016/17)



Source:https://www.cgmfpfed.org/new/tradeofNWFP_Gum.php

The collection and trade of Dhawda, Khair, and Babul gums in Chhattisgarh reveal a declining trend in physical output alongside rising price realizations. In the early 2000s, collection levels were relatively high, peaking at 1,196 quintals in 2001–02 and 619.25 quintals in 2009–10, generating sale values of ₹16.11 lakhs and ₹19.49 lakhs, respectively. However, post-2010, collection declined drastically, with only 26.74 quintals recorded in 2010–11 and a mere 7 quintals by 2013–14, before a marginal recovery to 27.5 quintals in 2016–17. Despite this decline, the average sale rate per quintal rose significantly from ₹1,749 in 2001–02 to ₹6,644 in 2010–11, indicating strong market demand even amidst shrinking supply. This divergence between quantity and price suggests ecological and regulatory constraints limiting production, while the rising rates reflect increasing commercial value. The negligible production in later years underscores sustainability concerns and the need for better resource management to harness the economic potential of these gums without overexploitation.

Sal Seed: Sal seed (Shorea robusta) is one of the most economically significant NTFPs in Chhattisgarh, primarily used for oil extraction, which serves as a cocoa butter substitute in the food industry, while the residual oil cake is utilized as organic manure and poultry feed. Its collection, concentrated in Bastar, Surguja, Korea, and adjoining districts during June–July, provides substantial seasonal income to forest dwellers. Recognizing its livelihood importance, the Government of India has included sal seed under the Minimum Support Price (MSP) scheme, with Chhattisgarh procuring it through cooperative societies at Rs. 2000 per quintal (2020). The Chhattisgarh State Minor Forest Produce Federation manages procurement, storage, and disposal via e-auctions, ensuring fair returns to collectors while channeling revenue through regulated trade. Thus, sal seed functions as both a vital source of rural livelihood and a raw material for industry, reinforcing its dual economic role in the state's NTFP sector.

The collection and sales of Sal seed in different years (2001-2020)

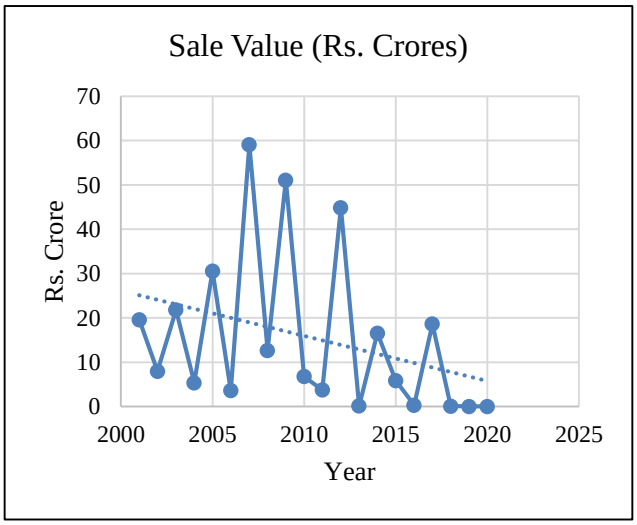
Table 04: Sal Seed related data (2001-2020)

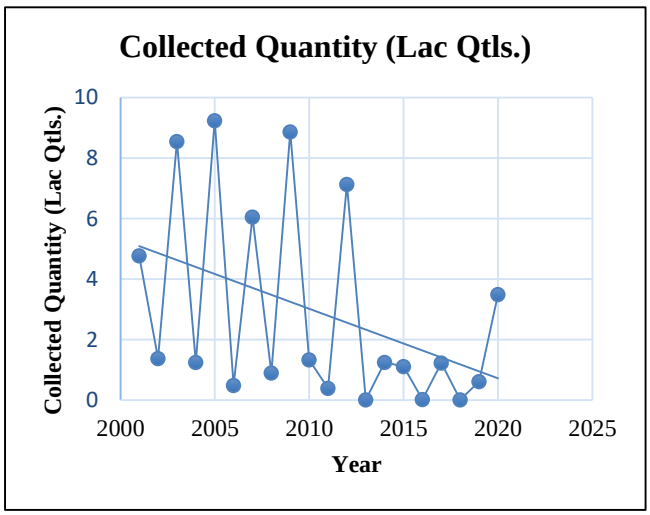
Year	Collected Quantity (Lac Qtls.)	Collection wages (Rs. Crores)	Sale Value (Rs. Crores)	Average Sale Rate (Rs. per Qntl.)
2001	4.77	15.28	19.6	411
2002	1.38	4.84	7.95	574
2003	8.55	42.74	21.8	255
2004	1.25	6.24	5.35	429
2005	9.24	46.22	30.56	331
2006	0.488	2.44	3.59	736
2007	6.06	30.32	59.09	974
2008	0.899	8.99	12.64	1407
2009	8.864	88.64	51.07	582
2010	1.34	6.72	6.76	502
2011	0.392	2.94	3.74	955
2012	7.13	35.72	44.89	629
2013	0.013	0.1	0.11	843

2014	1.257	12.57	16.57	1328
2015	1.12	11.2	5.85	523
2016	0.028	0.28	0.3	1177
2017	1.232	12.32	18.63	1513
2018	0.012	0.16	0.09	711
2019	0.616	12.32	-----	-----
2020	3.492	69.84	-----	-----

Figure 08: Sal Seed Quantity Collected (2001-2020)

Figure 09: Sale Value of Sal Seed (2001-2020)





Source: https://www.cgmfpfed.org/new/tradeofNNWFP_SalSeed.php

The data (as depicted by table 04, figure 08 & figure 09) on Sal seed collection and sale (2001–2020) reveals significant year-to-year fluctuations in both production and economic returns, highlighting the instability of this NTFP in Chhattisgarh. The collected quantity ranged from as high as 9.24 lakh quintals in 2005 to negligible levels like 0.013 lakh quintals in 2013 and 0.012 lakh quintals in 2018, showing extreme variability. Correspondingly, the sale value did not always align with production volume, indicating that market demand and pricing played a crucial role; for instance, in 2007, despite a moderate collection of 6.06 lakh quintals, the sale value peaked at ₹59.09 crores due to a higher average rate (₹974 per quintal). Price trends also show wide fluctuations—from ₹255 per quintal in 2003 (low value despite the highest collection of 8.55 lakh quintals) to ₹1513 per quintal in 2017, reflecting policy interventions, market volatility, and support mechanisms. In some years (2019–2020), sale value data is missing despite significant collection, indicating possible storage, delayed auctions, or policy transitions under the MSP scheme. Overall, the data underscores sal seed's importance as a volatile but vital income-generating NTFP, heavily influenced by ecological cycles, collection efforts, and market mechanisms.

Harra: Harra, commonly known as myrobalan (Terminalia chebula), is a valuable Non-Timber Forest Product used extensively in the tannin and pharmaceutical industries, and it is a principal component of Triphala, a key Ayurvedic formulation. In Chhattisgarh, it has an approximate annual production potential of 50,000 quintals, though actual yields vary markedly year to year. Recognizing its importance, Harra is included under the government's MSP scheme for minor forest produce, with the collection rate fixed at

₹1,500 per quintal for 2019–20. The Chhattisgarh State MFP Federation oversees procurement and disposal via e-tenders and e-auctions, following similar frameworks used for other MFPs.

The collection and sale of Harra in different years (2001/02 to 2019/20)

Table 05: Harra related data (2001-2020)

Year	Collected Quantity (Qtls.)	Collection Wages (Rs. Lakhs)	Sale Value (Rs. Lakhs)	Average Sale Rate (Rs. per Qntl.)
2001-02	60634.5	181.9	150.74	249
2002-03	85264.9	213.16	216.32	254
2003-04	63085.6	157.71	167.5	266
2004-05	60606.5	151.52	153.68	254
2005-06	44116.8	110.29	118.64	269
2006-07	59904.6	149.76	166.45	278
2007-08	42535.3	116.97	144.59	340
2008-09	49651.9	186.19	215.06	433
2009-10	33159.6	124.35	137.44	415
2010-11	16343.8	73.55	98.04	600
2011-12	71480.3	714.8	662.19	926
2012-13	29734.2	237.87	258.44	869
2013-14	15803.1	102.72	129.95	823
2014-15	34644.7	381.09	155.97	456
2015-16	57126.9	628.4	332.78	583
2016-17	3087.76	24.7	21.04	682
2017-18	178.82	1.97	1.4	1100
2018-19	1670.33	18.37	18.69	1119
2019-20	3346.36	50.2	46.44	1836

Source: https://www.cgmfpfed.org/new/tradeofNNWFP_Harra.php

Figure 10: Harra Quantity Collected (2001-2020)

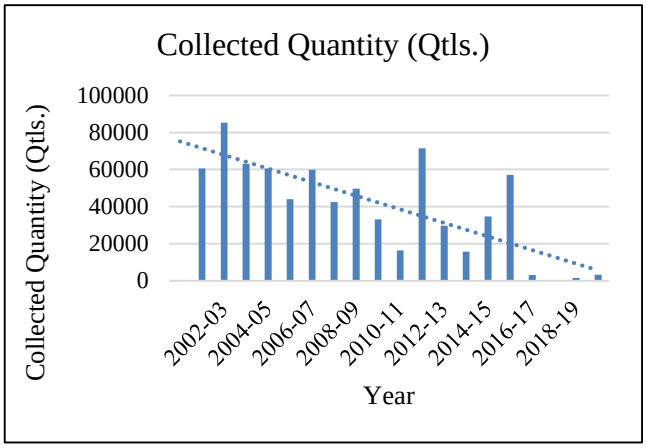
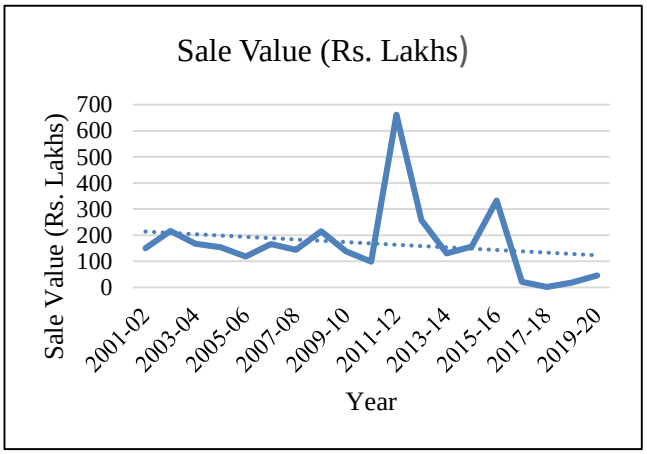


Figure 11: Sale Value of Harra (2001-2020)



The data spanning from 2001/02 to 2019/20 (as presented in Table 05, Figure 10, and Figure 11) highlights significant trends, with the year-wise analysis of Harra collection and sales in Chhattisgarh revealing the following overview between production levels and market valuation.

The collection and sale of Harra in Chhattisgarh display wide year-to-year fluctuations, reflecting variability in production and market demand. From 2001–02 to 2006–07, annual collection ranged between 44,000–85,000 quintals with steady sale rates of around ₹250–278 per quintal, while wages and sale values remained proportionate. A notable price surge began in 2007–08, when the average sale rate rose to ₹340 per quintal, continuing upward to ₹926 by 2011–12 despite variations in collection volume. Post-2012, both collection quantity and trade value showed sharp inconsistencies—dropping as low as 179 quintals in 2017–18—but the price per quintal increased dramatically, reaching ₹1,836 in 2019–20. This trend indicates a long-term rise in Harra's market value despite declining and unstable collection levels, suggesting increasing industrial demand, possible resource depletion, and greater reliance on value-based pricing under MSP-supported trade practices.

Annual Potential and Economic Value of NTFPs in Chhattisgarh

Non-Timber Forest Products (NTFPs) constitute a crucial component of the forest economy, offering both subsistence and commercial value to forest-dependent and tribal communities. The data (Data Source: www.cgmfpfed.org) under study highlights the annual potential and approximate market value of medicinal and non-medicinal NTFPs, reflecting their diverse role in livelihood generation and regional development.

Medicinal NTFPs:

Medicinal NTFPs represent a wide variety of products used in traditional medicine, Ayurveda, pharmaceuticals, and household remedies. Among these, Sal Seed (Shorea robusta) emerges as the most prominent with an annual potential of 700 thousand quintals, valued at ₹90 crores. Aonla (Emblica officinalis) and Harra (Terminalia bellirica) also contribute significantly with values of ₹20 crores and ₹10 crores, respectively.

An important finding is the case of Baibadang (Embelia Ribes), which, despite having a relatively low potential of 11 thousand quintals, contributes a remarkably high value of ₹30 crores, suggesting niche demand and strong price realization. Similarly, products like Honey, Safed Musli, and Tikhur exhibit a high value-to-quantity ratio, highlighting opportunities for value addition and commercialization.

Collectively, medicinal NTFPs generate an estimated ₹218 crores annually, underlining their role not only in healthcare but also as a source of income diversification for local communities.

Non-Medicinal NTFPs:

Non-medicinal NTFPs demonstrate a much larger economic contribution compared to medicinal products. Imli (Tamarindus indica) and Mahua Flower (Madhuca indica) dominate the category with annual values of ₹130 crores each, supported by large-scale availability. Mahua Seeds (₹80 crores) and Chironji (₹60 crores) further strengthen the economic base, with Chironji standing out for its high value despite comparatively lower production volume.

Industrial and commercial NTFPs such as Kusum Lac (₹40 crores), Palas Lac (₹25 crores), and Kosa (Tassar silk, ₹30 crores) indicate the sector's importance beyond subsistence use, particularly in industries like textiles, resins, and exports. The cumulative value of non-medicinal NTFPs amounts to ₹562 crores annually, making them the backbone of the NTFP economy with nearly 72% share of the total value.

Comparative Economic Significance: The combined economic contribution of medicinal and non-medicinal NTFPs is estimated at ₹780 crores annually. Within this, non-medicinal products account for the majority share, underscoring their dominance in the NTFP economy.

Two key patterns are evident:

- High-volume, high-value NTFPs such as Sal Seed, Mahua Flower, Mahua Seeds, and Tamarind drive large-scale trade and livelihood dependency.
- Low-volume, high-value NTFPs such as Baibadang, Chironji, and Lac products highlight the potential for specialized markets, value addition, and export-oriented opportunities.

The economic overview of NTFPs reveals their dual importance: medicinal NTFPs support traditional healthcare systems and niche markets, while non-medicinal NTFPs provide broader commercial and livelihood opportunities. Sustainable management, scientific harvesting, and enhanced value chain linkages are essential to maximize their economic potential. Strengthening policies around NTFPs can ensure not only conservation of biodiversity but also inclusive growth for tribal and rural populations that depend on these resources.

Economic Challenges and Opportunities of NFTP's in Chhattisgarh

Challenges: Despite their immense potential, Non-Timber Forest Products (NTFPs) in Chhattisgarh face several economic challenges that restrict their effective contribution to rural and tribal livelihoods. A major concern is the dependence on middlemen and local traders, which often results in low price realization for primary collectors. The absence of transparent and competitive markets exacerbates the problem, leaving gatherers with little bargaining power. In addition, price fluctuations and seasonality of

availability make incomes highly unstable, forcing forest-dependent communities to remain in a cycle of economic vulnerability.

Another significant challenge is the lack of value addition and processing facilities, due to which most NTFPs are sold in raw form. This prevents local communities from capturing higher returns that could be obtained through semi-processing, grading, packaging, or product diversification (for example, tamarind paste, mahua-based beverages, or herbal extracts). The limited access to organized supply chains and national/international markets further restricts income opportunities, confining producers to localized trade.

Moreover, inadequate access to formal credit and financial services compels gatherers to rely on informal moneylenders, often at exploitative interest rates. This financial exclusion reduces their ability to invest in improved harvesting, storage, or small-scale enterprise activities. Although government interventions like Minimum Support Price (MSP) schemes exist, their coverage is limited, and delays in procurement often weaken their effectiveness. Collectively, these challenges create a structural barrier, preventing NTFPs from achieving their true economic potential in Chhattisgarh's forest-based economy.

Opportunities: Chhattisgarh's rich forest diversity provides vast opportunities for strengthening the Non-Timber Forest Products (NTFP) economy, particularly through institutional innovations and market-oriented interventions. With high demand for tamarind, mahua, chironji, lac, and medicinal herbs, there exists significant potential for value addition, processing, and export. Establishing local processing units for herbal extracts, lac-based varnishes, mahua-based food and beverages, and tamarind products can substantially enhance income generation while reducing dependence on raw-product sales. Moreover, the expansion of the Minimum Support Price (MSP) scheme and the recognition of Community Forest Rights (CFRs) under the Forest Rights Act create an enabling framework for equitable and sustainable utilization of NTFPs.

To promote organized trade, the state has introduced NWFP Marts across six forest circle headquarters, where raw forest produce collected and processed by Self-Help Groups (SHGs), cooperatives, and primary societies is traded at fair and predetermined prices. In addition, herbal products are being marketed under the brand "Chhattisgarh Herbals", with promotional campaigns conducted through various mediums. Retail sales have also been strengthened through 30 Sanjeevani outlets located in divisional forest headquarters, thereby expanding consumer reach and creating visibility for forest-based products. Alongside, the state has supported the establishment of 74 microenterprises of NTFP-based processing units, involving 1,302 groups and over 17,196 beneficiaries, producing more than 103 types of products, including medicinal formulations, food products, and mahul leaf plates. These interventions demonstrate the strong potential of NTFPs in generating employment and strengthening rural entrepreneurship.

Chhattisgarh holds vast opportunities in lac cultivation, supported by the natural abundance of Kusum, Palash, and Ber trees and strong institutional backing. Over 22,000 farmers are already engaged under the Lac Development Scheme, with training facilities in Kanker ensuring adoption of scientific rearing practices. The state currently produces around 4,000 MT of lac annually, yet has the capacity to scale much higher, particularly in key districts like Jagdalpur, Kanker, Mahasamund, Gariaband, Korea, Sarguja, and Kabeerdham. Government schemes, including SGSY with a 75:25 Central–State funding

model, have demonstrated success by establishing microenterprises valued at over ₹27 crore, showcasing lac's potential as a sustainable, high-value product. With applications in medicine, food, cosmetics, varnishes, and eco-friendly crafts, lac cultivation and processing in Chhattisgarh represent a significant livelihood and export opportunity, capable of positioning the state as a national leader in this sector.

Together, these initiatives highlight the untapped potential of NTFPs as a cornerstone of Chhattisgarh's rural economy. By strengthening value chains, promoting microenterprises, and enhancing branding and market visibility, NTFPs can generate sustainable livelihoods, empower women, and contribute to both economic and ecological resilience in the state.

Conclusion

The economic overview of Non-Timber Forest Products (NTFPs) in Chhattisgarh reveals a dual narrative of challenges and opportunities. On one hand, issues such as low price realization, dependence on middlemen, inadequate processing infrastructure, and weak market linkages continue to constrain the sector's potential. On the other hand, the state's rich forest diversity, strong demand for natural products, supportive policy interventions like the Minimum Support Price scheme, and the scope for value addition and exports highlight immense growth opportunities. By addressing structural and economic constraints while simultaneously strengthening institutional support, skill development, and sustainable harvesting practices, NTFPs can emerge as a cornerstone of rural development, women's empowerment, and ecological sustainability in Chhattisgarh.

References

1. Chhattisgarh State Minor Forest Produce (Trading & Development) Co-operative Federation Ltd. (n.d.). Welcome: Minor forest produce (MFP). http://www.cgmfpfed.org
2. Churpal, D., Gauraha, A. K., Pathak, H., & Seth, M. K. (2021). An economic evaluation of cost and return on non-timber forest products (NTFPs) in Chhattisgarh. Journal of Pharmacognosy and Phytochemistry, 10(1), 272–274.
3. Gupta, A. K., Sharma, M. L., & Limje, S. (2018). Economic empowerment of tribes through non-timber forest products (NTFPs) in Chhattisgarh state. Indian Journal of Extension Education, 54(4), 139–146.
4. Hazari, S., Kalita, M., & Lahiri, B. (2023). The value of non-timber forest products (NTFPs) in promoting India's rural livelihoods. Indonesian Journal of Forestry Research, 10(2), 221–237.
5. Keelery, S. (2024, April 10). Gross value added from non-timber forest products across India from financial year 2012 to 2021 (in billion Indian rupees). Statista. https://www.statista.com/statistics/1083252/india-economic-contribution-of-non-timber-forest-products/
6. Pandey, A. K., Tripathi, Y. C., & Kumar, A. (2016). Non-timber forest products (NTFPs) for sustained livelihood: Challenges and strategies. Research Journal of Forestry, 10(1), 1–7.
7. Sharma, M. (2024, November 15). Chhattisgarh Industrial Development Policy 2024–2030: A blueprint for sustainable growth. Bharatiya Media. https://bharatiyamedia.com/chhattisgarh-industrial-development-policy-2024-2030

8. Talukdar, N. R., Choudhury, P., Barbhuiya, R. A., & Singh, B. (2021). Importance of non-timber forest products (NTFPs) in rural livelihood: A study in Patharia Hills Reserve Forest, northeast India. Trees, Forests and People, 3, 100042.
9. Tamrakar, A., Dixit, B., Singh, S., & Chandrakar, S. (2023). Non-timber forest products: A route to the tribal economy at Kondagaon forest division, Chhattisgarh, India. Plant Archives, 23(2), 374–378.