



International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 02, February 2026)

Impact of Forest Conservation Measures on Tribal Communities in Tamil Nadu

T. Praveena¹, Dr. P. Shanmugam²

²Associate Professor, Department of Economics, Bharathiar University –

¹Ph. D. Research Scholar, Department of Economics, Bharathiar University

Abstract--This review paper examines the impacts of forest conservation measures on tribal communities, with a focus in Tamil Nadu. Using secondary sources—including government reports, academic studies, NGO reports, and media coverage—the study combines information on tribal displacement, Forest Rights Act (FRA) implementation, and forest land diversion. Evidences indicated that while conservation policies have improved ecological outcomes, restrictions on traditional livelihoods and incomplete recognition of land rights have negatively affected tribal incomes and access to resources. This study will highlight participatory forest management and effective FRA implementation to align ecological conservation with tribal welfare.

Keywords-- Tribal livelihoods, displacement, Forest Rights Act, SDG.

I. INTRODUCTION

Forests have always been a lifeline for people, animals, and the environment. They provide food, water, fuelwood, medicines, and jobs, and at the same time protect biodiversity and regulate our climate. In a state like Tamil Nadu, which has large areas of rich forests, the government has taken many steps to conserve these resources. Over the years several tiger reserves and wildlife sanctuaries have been declared to protect endangered species, stop deforestation, and restore degraded forests. These steps are in line with the global goal of **SDG 15.2**, which talks about managing forests sustainably and stopping deforestation (United Nations, 2015).

Today Tamil Nadu has five big tiger reserves—Kalakkad–Mundanthurai, Mudumalai, Anamalai, Sathyamangalam, and Srivilliputhur–Megamalai—each set up in different years with different sizes and management systems (NTCA, 2022). These reserves have played a major role in increasing tiger numbers and also in improving forest cover. Between 2011 and 2021, the forest area increased from 18 percent to 20 percent and the tiger population more than doubled from 134 to 312 (Forest Survey of India, 2021; NTCA, 2022).

But these achievements have also brought changes for people, especially the tribal households living near or inside the forests. For generations they depended on forests for collecting non-timber forest products (NTFPs), grazing cattle, and practicing shifting cultivation. After the creation of reserves and stricter rules, their access to these resources reduced sharply. Many families had to shift from subsistence-based livelihoods to wage labor, seasonal migration, or reliance on government welfare schemes (Ministry of Tribal Affairs, 2021). This has weakened their cultural and economic link with forests and raised new challenges for their survival and well-being.

This review paper is an attempt to understand the impact of forest conservation measures on tribal livelihoods in Tamil Nadu under the framework of SDG 15.2. It also tries to highlight the trade-offs between achieving ecological goals and safeguarding the rights and livelihoods of tribal communities. By bringing together information from various reports and studies, the review aims to suggest ways to make forest conservation more inclusive, fair, and sustainable for everyone.

II. REVIEW OF LITERATURE

Kumar (2019) highlighted that the expansion of protected areas in Tamil Nadu, particularly tiger reserves, reflects a clear shift toward stricter conservation and habitat restoration, but warned that such measures can restrict the customary rights of tribal communities, affecting their socio-economic stability.

Thomas and Singh (2020) examined the management of Srivilliputhur–Megamalai and Kalakkad–Mundanthurai tiger reserves, finding that larger core areas and improved habitat connectivity resulted in better wildlife outcomes but also increased the displacement of forest-dependent households and reduced access to grazing lands.

Banerjee (2021) reported that despite an increase in tiger populations and forest cover, the livelihood base of tribal communities has eroded sharply, with a steep decline in NTFP collection, shifting cultivation, and traditional forest use due to stricter access controls inside protected areas.

Choudhury (2018) documented income losses from declining NTFP collection in reserve-adjacent villages and noted that government support programs had not yet fully offset these losses, increasing household vulnerability and seasonal migration rates.

Rajan and Priya (2020) emphasized that wage employment schemes like MGNREGA have become a critical coping mechanism for displaced or marginalized tribal households, marking a transition from subsistence-based to cash-based livelihoods but creating dependence on external interventions.

Das (2022) found that only one-fourth of FRA claims have been granted in Tamil Nadu, limiting legal entitlements to land and forest resources for indigenous communities and creating a gap between conservation objectives and social equity under SDG targets.

III. OBJECTIVES

- 1) To study the major forest conservation measures with reference to tiger reserves in Tamil Nadu.
- 2) To see changes in tribal household income and livelihood after the conservation measures.

IV. METHODOLOGY

This study is based on a descriptive review of secondary data from government reports (Forest Survey of India, NTCA, Ministry of Tribal Affairs), peer-reviewed articles, NGO studies and news sources between 2011 and 2022. Key indicators such as reserve area, forest cover, tiger population, NTFP dependence, income shifts and FRA claim status were extracted and compared before and after conservation measures. A simple comparative and thematic analysis was used to identify trends in livelihood change and policy impacts on tribal communities. Findings were interpreted in the context of SDG 15.2 to understand the balance between forest conservation and tribal livelihoods.

V. DATA ANALYSIS

Table 1:
Tiger Reserves in Tamil Nadu

Tiger Reserve Area	Year Notified	Core Area (sq. km)	Buffer Area (sq. km)	Total Area (sq. km)
Kalakkad–Mundanthurai	1988	895	706	1,601
Mudumalai	2007	321	367	688
Anamalai	2008	958	521	1,479
Sathyamangalam	2013	793	614	1,407
Srivilliputhur–Megamalai	2021	1,016	528	1,544

Source: NTCA, MoEFCC, Tamil Nadu Forest Dept.

Table 1 portrays the data indicate that Tamil Nadu’s tiger reserves differ considerably in both size and configuration. Kalakkad–Mundanthurai, notified in 1988, is the largest with a total area of 1,601 sq. km, combining a substantial core area of 895 sq. km and a 706 sq. km buffer. Srivilliputhur–Megamalai, declared in 2021, stands out with the state’s largest core area of 1,016 sq. km within a total of 1,544 sq. km, reflecting a strong conservation focus from the outset. Anamalai (1,479 sq. km) and Sathyamangalam (1,407 sq. km) also represent large reserves balancing extensive core and buffer zones to support both tiger habitats and community interface. In contrast, Mudumalai, at 688 sq. km, is comparatively smaller but maintains a compact core-buffer arrangement. Overall, the figures show a clear policy shift toward establishing and expanding larger reserves with significant core and buffer areas to strengthen long-term tiger conservation efforts in the state.

Table 2:
Change in Income of Tribal Households Before and After Tiger Reserve Implementation

Livelihood Activity	Change in Income Before Reserve	Change in Income After Reserve	Net Change
Non-Timber Forest Products (NTFPs)	45%	10%	–35%
Shifting Cultivation	25%	5%	–20%
Cattle Grazing	15%	8%	–7%
Wage Labor / MGNREGA	8%	40%	+32%
Seasonal Migration	7%	22%	+15%

Source: Compiled from secondary data (Forest Survey of India, 2021; NTCA, 2022; Scroll.in, 2021; The Hindu, 2021; New Indian Express, 2019; The Guardian, 2025).

The data reveal a marked shift in the livelihood patterns of households following the establishment of the tiger reserve. Dependence on forest-based activities such as non-timber forest product (NTFP) collection and shifting cultivation has sharply declined, with NTFP collection falling from 45 percent to 10 percent (−35%) and shifting cultivation from 25 percent to 5 percent (−20%), indicating restricted access to traditional forest resources. Cattle grazing also reduced moderately from 15 percent to 8 percent (−7%), reflecting tighter grazing controls within the reserve.

Conversely, reliance on wage employment, particularly through MGNREGA, has risen significantly from 8 percent to 40 percent (32%), showing a shift from subsistence-based to cash-based livelihoods supported by government schemes. Seasonal migration too increased from 7 percent to 22 percent (15%), suggesting that reduced local livelihood opportunities have compelled households to seek employment elsewhere. Overall, these trends indicate a transition away from traditional, forest-dependent livelihoods toward wage labor and migration-based incomes, underscoring the need for sustainable livelihood alternatives and skill development initiatives to support affected communities.

Table 3:
SDG Mapping of conservation and livelihood outcomes

Indicator	Trend (2011-2021)	Related SDG Target
Forest Cover	Increased from 18% to 20%	Sustainable forest management (SDG 15.2)
Tiger Population	Increased from 134 to 312	Protect threatened species (SDG 15.5)
Displacement of Tribal Households	Approximately 3,000+ families affected	Equal rights to economic resources (SDG 1.4)
FRA Implementation	Only 25% claims granted	Empower marginalized groups (SDG 10.2)
NTFP Collection	Increased from 45% to 10% households	Agricultural productivity & incomes (SDG 2.3)
Wage Labour Dependence	Increased from 8% to 40% households	Decent work for all (SDG 8.5)
Seasonal Migration	Increased from 7% to 22% households	Reduce income inequality (SDG 10.1)
Government Schemes Dependence	Increased to 15% households	Social protection systems (SDG 1.3)

Source: FSI Reports (2011, 2021), NTCA Tiger Estimation (2006–2022), MoEFCC reports, NGO studies, FRA status (Tribal Welfare Dept.), NGO reports, MGNREGA data, field reports, State welfare reports

Table 3 represents the SDG mapping of conservation and livelihood outcomes . Between 2011 and 2021, the Thalavadi region has seen notable environmental improvements, but these have come with significant challenges for local tribal communities. Forest cover increased from 18 percent to 20 percent, reflecting successful conservation and sustainable management efforts (Tamil Nadu Forest Department, 2021).

Similarly, the tiger population more than doubled from 134 to 312, showing that protection measures and habitat restoration have been effective (National Tiger Conservation Authority, 2021). At the same time, over 3,000 tribal households were displaced, highlighting the tension between conservation objectives and the rights of indigenous communities (FRA Watch, 2020). Only 25 percent of Forest Rights Act claims were granted, limiting access to land and other economic resources for marginalized groups (Ministry of Tribal Affairs, 2021).



International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 02, February 2026)

Traditional livelihoods have been significantly affected: the proportion of households dependent on non-timber forest products fell from 45 percent to 10 percent, while reliance on wage labor rose from 8 percent to 40 percent, and seasonal migration increased from 7 percent to 22 percent, indicating growing economic vulnerability (Indian Institute of Forest Management, 2020; National Institute of Rural Development, 2021). Additionally, 15 percent of households have come to rely on government schemes, suggesting partial dependence on social protection to meet basic needs (Ministry of Rural Development, 2021). Overall, while conservation goals have been largely achieved, these trends highlight a critical trade-off between ecological success and the livelihoods of tribal communities, emphasizing the need for policies that integrate environmental sustainability with social and economic equity.

VI. CONCLUSION

The study shows that Tamil Nadu did a lot for forest protection and tiger numbers have increased. Forest area also increased. This is a big success under SDG 15.2. But at the same time tribal people lost many of their old ways of living like NTFP collection, grazing and shifting cultivation. They had to move to wage work and migration. Only a few Forest Rights Act claims are given which makes situation more difficult. So conservation without thinking about people creates new problems. There is need for programmes like community forest management, training and jobs, value addition of forest products and proper FRA implementation. If these are done then both forest and people will benefit and conservation will be more sustainable and fair.

VII. SUGGESTIONS

- 1) Introduce participatory conservation models where local communities co-manage tiger reserves and benefit from eco-tourism, NTFP collection, and conservation-linked employment.
- 2) Provide training and support to form community forest user groups.

REFERENCES

- [1] Banerjee, S. (2021). Conservation versus livelihoods: The impact of tiger reserves on forest-dependent communities in India. *Economic and Political Weekly*, 56(44), 25–32.
- [2] Choudhury, R. (2018). Non-timber forest products and tribal livelihoods: A case from South India. *Journal of Forest Policy*, 22(3), 145–160.
- [3] Das, P. (2022). Forest Rights Act implementation in Tamil Nadu: Gaps and challenges. *Indian Journal of Tribal Studies*, 14(2), 67–84.
- [4] Forest Survey of India (FSI). (2021). India State of Forest Report 2021. Ministry of Environment, Forest and Climate Change, Government of India.
- [5] FRA Watch. (2020). Status of FRA implementation in Tamil Nadu. New Delhi: FRA Watch.
- [6] Indian Institute of Forest Management. (2020). Livelihood transitions in tiger landscapes of India. Bhopal: IIFM.
- [7] Kumar, A. (2019). Protected areas and tribal rights: An analysis of tiger reserves in Tamil Nadu. *International Journal of Social and Environmental Research*, 8(2), 101–118.
- [8] Ministry of Rural Development. (2021). MGNREGA annual report 2020–21. Government of India.
- [9] Ministry of Tribal Affairs. (2021). Annual report 2020–21. Government of India.
- [10] National Institute of Rural Development. (2021). Migration and rural livelihoods: Emerging trends. Hyderabad: NIRD.
- [11] National Tiger Conservation Authority (NTCA). (2022). Status of Tigers, Co-predators, and Prey in India 2022. Ministry of Environment, Forest and Climate Change, Government of India.
- [12] Rajan, K., & Priya, M. (2020). Employment schemes and livelihood shifts among tribal households: Evidence from Tamil Nadu. *Journal of Development Studies*, 12(1), 55–72.
- [13] Scroll.in. (2021, June 14). What tiger conservation has meant for India's Adivasis. Retrieved from <https://scroll.in>
- [14] Tamil Nadu Forest Department. (2021). Forest statistics of Tamil Nadu 2020–21. Government of Tamil Nadu.
- [15] The Guardian. (2025, January 5). India's tiger boom comes at a cost for tribal communities. Retrieved from <https://theguardian.com>
- [16] The Hindu. (2021, December 12). Forest rights and livelihoods in Tamil Nadu reserves. Retrieved from <https://thehindu.com>
- [17] Thomas, R., & Singh, A. (2020). Tiger conservation and community displacement: Case studies from Tamil Nadu. *Conservation and Society*, 18(4), 359–370.
- [18] United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. United Nations.