

# A Pathway to Economic Independence and Sustainability: Women Empowerment and Rubber Plantation in Karbi Anglong

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**Abstract:** Women empowerment is the all round development of women and not merely a catchphrase but a critical pathway towards achieving Sustainable Development Goals (SDG's). Empowering women economically is essential for the Gender Equality, Poverty Eradication and all round development of women. A large scale adaptation of Rubber plantation in Karbi Anglong district along with the nation, presents a unique opportunity for women's empowerment and for sustainable development. It is offering a platform for Economic Independence, Skill Development, and Environmental Sustainability. The present study tried to explore the intersection of women empowerment and rubber plantation as well as socio-political influences. The study is also elucidating how rubber plantation serves as an opportunity for the economically marginalized women of the regions. Women participation into the rubber sector, it is a positive change in their lives as well as the entire communities. How the women became economically self-dependent through the participation in rubber plantation.

**Keywords:** Development, Economy, Empowerment, Rubber Plantation, Sustainability, Women.

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## I. INTRODUCTION

Empowerment is a multidimensional process, which enables the individual or group of individuals to realize their full identity and powers in all spheres of life. It consists of greater access to knowledge and resources, greater autonomy in decision making to have greater control over the circumstances that influence their lives and make them free from the shackles imposed on them by custom, belief and practice (Borthakur, 2014).

Women empowerment means equal status, opportunity and freedom to women for their upliftment. Thus, women empowerment refers to the dignity and right of the women towards their social life especially in the field of social, political and economic spheres. (Borthakur Tamuli, 2014).

Karbi Anglong district of Assam is known for its rich biodiversity and traditional livelihoods, and it has a quietly unfolding transformative journey. Here, the convergence of

women's empowerment and rubber plantation is forging a resilient pathway toward economic independence and ecological sustainability. Traditionally, the local Karbi women have been guardians of nature; stewards of forest resources; biodiversity and indigenous ecological wisdom (Teronpi, 2025). This is deeply rooted environmental ethos, when combined with modern economic opportunities, creates fertile ground for meaningful empowerment.

Now, rubber cultivation stands out as a potential instrument for economic upliftment. The region's substantial contribution over 14,000 hectares land under rubber cultivation and nearly 60,000 jobs generated. Meanwhile it has potential to reshape local economies (Statistical Handbook, 2017–18). When women are central to this transformation; through self-help groups, local small industries, or leadership in sustainable agro-businesses and the benefits ripple out, strengthening not only households but the broader community and ecosystem.

The present study has been intended to do a deeper discussion on how the synergy of environmental stewardship and economic agency can empower women of the district. Rubber has been empowered women, revitalizing the rural economies, and support sustainable development for futures generations.

## II. REVIEW OF LITERATURE

Rubber cultivation in India's Northeastern parts of India, especially in Assam's Karbi Anglong, has been positioned as a strategic alternative to fallow land use and shifting agriculture. For instance, *Times of India* reports that the Assam government targeted 150,000 hectares in Karbi Anglong for rubber plantations, aiming to alleviate unemployment and even rehabilitate former insurgents through plantation work (The Times of India, 2012).

A deeper social-economic exploration emerges in the article "Mainstreaming Gender Narratives: A Study on Women Empowerment of Kuki Women in Assam's Karbi Anglong District: A Case Study in Diphu Town" (Choudhury, 2016), analyses how mental and developmental boundaries have historically marginalized tribal women, affecting their ability to access empowerment initiatives.

From a gender-and-land perspective, the article "Making it Work: Women, Land and Labour in West Karbi Anglong, Assam" (Varkey et al., 2024) provided in-depth interviews and focuses on how women's vulnerability and agency shape agricultural outcomes in women-operated smallholdings (Taylor & Francis, 2009).

On environmental and cultural continuity, "Karbi Women and Environmental Conservation" (Hansepi & Laisram, 2022) highlights how Karbi women play integral roles in managing community forests and sacred groves, underscoring their traditional conservation ethics and communal land stewardship.

While not about Karbi Anglong specifically, the book "The History of Doing: An Illustrated Account of Movements for Women's Rights and Feminism in India 1800–1990" (Kumar, 1993) provides valuable historical context about broader women's empowerment movements in India; which could inform how institutional frameworks (like SHGs or livelihood missions) might shape empowerment outcomes in Karbi Anglong's rubber economy.

In the book "Women Empowerment" (Kumar, 2015) discussed the various form of empowerment and element which helps to define empowerment of the Women. It has not mentioned tribal women of Karbi Anglong district; talk about Women in general context.

### ➤ Research Gap

Contemporary literature indicates that rubber cultivation has become an important livelihood in Karbi Anglong and across northeast India. It is improving household incomes and changing livelihood patterns. Yet, while several studies document aggregate economic outcomes of rubber expansion, there is a striking shortage of gender-disaggregated, empirically grounded research that centers women's lived experiences, decision-making power, and control over rubber-derived income in Karbi Anglong specifically. Existing socio-economic surveys of rubber workers in Diphu and district-level overviews often treat households as single economic units without unpacking intra-household gender dynamics, time use, or how women negotiate access to land, credit, and markets. Second, scholars from the region have tended to focus on either economic indicators or on environmental impacts of monoculture rubber plantations, but rarely on the trade-offs between women's economic empowerment and environmental sustainability at the micro level. Questions remain about whether rubber adoption by women (or households where women are primary actors) leads to sustainable livelihoods over the medium term, how women perceive ecological risks (soil, water, biodiversity), and whether livelihood gains are resilient to climate and market shocks. Third, institutional and value-chain dimensions, such as the role of self-help groups (SHGs), producer cooperatives, Rubber Board extension, credit access, and market linkages etc. are under-explored from a women-centred governance perspective in Karbi Anglong. While regional policy and project reports describe institutional initiatives, there is limited evaluative research on whether these mechanisms actually improve women's agency or if they reproduce existing inequalities. Finally, little work has captured indigenous knowledge, culture, and land-tenure norms as they intersect with rubber adoption by tribal women in Karbi Anglong.

### ➤ Objectives of the Study

- To examine the role of women's participation in rubber plantation activities in enhancing their economic independence in Karbi Anglong.
- To explore the contribution of rubber plantations to sustainable livelihoods and community development in the region.
- To analyze the challenges faced by women in accessing resources, training, and market opportunities within the rubber plantation sector.
- To assess how women's involvement in rubber plantations influences household decision-making, social status, and empowerment.
- To identify strategies for promoting gender-inclusive and environmentally sustainable rubber plantation practices in Karbi Anglong.

### ➤ *Research Questions*

- How does women's participation in rubber plantations contribute to their economic independence in Karbi Anglong?
- In what ways do rubber plantations promote sustainable livelihood opportunities for women and their communities?
- What socio-economic and environmental challenges do women encounter in the rubber plantation sector?
- How does engagement in rubber plantation work affect women's roles in household decision-making and community leadership?
- What policy and capacity-building measures can enhance women's empowerment and sustainability in the rubber plantation sector?

## III. METHODOLOGY

This study adopts a qualitative descriptive research design and incorporated both Primary and Secondary sources of data to explore the link between women's empowerment and the rubber plantation economy in Karbi Anglong district. The research will be conducted in selected rubber-growing villages of Karbi Anglong district, Assam, where women are actively engaged in rubber plantation activities, from nursery development to latex collection.

A purposive sampling method has been employed to select participants who are directly involved in rubber plantation work, either as independent entrepreneurs, Self-Help Group (SHG) members, or wage laborers. A total of 100 women participants are selected to ensure diverse perspectives across socio-economic backgrounds.

For the collection of primary data, a Semi-structured interview scheduled has been used. Which includes personal narratives regarding income generation, decision-making power, and challenges faced in plantation work; Focus group discussions also are organized to understand collective experiences, cooperative efforts, and community-level benefits; Field observations on day-to-day activities, work conditions, and the role of women in plantation management. For the collection of secondary data, used secondary sources like relevant available literature; governmental and Non-governmental Project Reports; Documents; books; journals articles and news papers etc.

For the analysis of data, thematic analysis has been applied to qualitative data related to empowerment, economic independence and sustainability.

### ➤ *Statement of the Problem*

Karbi Anglong, the largest district of Assam, is home to a significant tribal population. Whose livelihoods have traditionally depended on subsistence agriculture, forest resources, and small-scale trading (Goswami & Teron, 2021). However, fluctuating crop yields, limited access to markets, and

inadequate infrastructure have perpetuated cycles of poverty and economic vulnerability, especially among women. In many tribal communities, women's economic participation is constrained by traditional gender roles, lack of skill-based opportunities, and minimal access to credit or ownership of productive resources (Baruah, 2020).

In recent decades, the introduction of rubber plantations has emerged as an alternative livelihood option in Karbi Anglong, offering potential for stable income, employment generation, and sustainable land use (Indian Rubber Board, 2022). Women, in particular, have begun engaging in various stages of rubber cultivation. Activities like from nursery development to latex processing. There by expanding their role from unpaid household contributors to active income earners. This shift not only holds promise for economic independence but also for enhanced decision-making power and community leadership among tribal women.

Despite its potential, the integration of women into the rubber economy faces several challenges. Limited technical training, fluctuating market prices, lack of direct access to buyers, and environmental concerns threaten the long-term sustainability of this livelihood source (Borah & Ahmed, 2019). Additionally, there is limited empirical research on how women's participation in the rubber sector specifically impacts their socio-economic empowerment and the sustainability of rural livelihoods in the district. Without addressing these gaps, policy interventions may fail to harness the full potential of rubber plantations as a tool for gender empowerment and sustainable development in Karbi Anglong. Thus, it becomes crucial to examine the role of rubber plantations in fostering women's economic independence while ensuring environmental and social sustainability.

### ➤ *Significance of the Study*

The present study has academic, social, and policy-oriented importance. They are as follows: -

- This study contribute to women's economic empowerment literature for future, by examining how rubber plantation has been influenced women's income, saving habits and participation in decision making process.
- Findings of the study may help policy maker, the government and local agencies for the policy making.
- Rubber plantation has the potential to offer a steady income while encouraging agro-forestry and sustainable land use.
- Women's active participation in rubber plantations will stress on the role of grassroots entrepreneurship and SHGs in transforming rural economies. This can inspire replication of such models in other tribal and rural contexts.

#### IV. DISCUSSION AND ANALYSIS

Historically, women have played significant roles in agriculture; often relegated to labor-intensive tasks while being excluded from decision-making processes and denied access to resources. In the rubber plantation sector, women have been involved in various stages of production, including tapping, harvesting, and processing. However, their contributions have often been undervalued and undercompensated. Despite facing numerous challenges, women have demonstrated resilience and determination, showcasing their potential as key stakeholders in the rubber industry. Presently, in the Karbi Anglong district has diverse agro-economy with significant rubber cultivation covering 14,000 hectares (together both small & large holdings) and generating employment for about 60,000 people approximately. This reveals the considerable potentiality of rubber plantation in the district as a lever for rural livelihoods and economic stability.

Empowerment involves increasing women's agency to shape their lives and environment. In Karbi Anglong, self-help groups (SHGs), particularly under government schemes like the Kanaklata Mahila Sabalakaran Achoni (KMSA), have enabled women including those in the Manjir SHG's to engage in sustainable livelihoods such as handloom and textile crafts. While not directly focused on rubber plantation, the model of SHG-bank linkages shows how collective action and credit access can enhance economic independence; an opportunity relevant to rubber enterprises, too. The following ways rubber plantation has been playing a role in women empowerment:

##### ➤ *Economic Independence*

Rubber plantation offers women an opportunity to achieve economic independence and financial stability. By engaging in various aspects of rubber cultivation and processing, women can generate income to support themselves and their families. Access to steady employment and income-generating activities enables women to contribute to household expenses, invest in their children's education, and save for the future. Moreover, economic empowerment enhances women's decision-making power within their households and communities, fostering greater autonomy and agency.

##### ➤ *Skill Development*

Engagement in rubber plantation activities provides women with opportunities for skill development and capacity building. From learning about agroforestry techniques to acquiring knowledge of rubber tapping and processing methods, women acquire valuable skills that enhance their employability and entrepreneurship prospects. Training programs and workshops focused on sustainable farming practices, financial literacy, and business management further empower women to become effective leaders and change agents in their communities. By equipping women with relevant skills and knowledge, rubber plantation promotes their upward mobility and socio-economic advancement.

##### ➤ *Environmental Sustainability*

Rubber plantation plays a crucial role in environmental conservation and sustainable land management. As stewards of the land, women are instrumental in implementing eco-friendly practices and preserving biodiversity within rubber estates. By promoting organic farming methods, agro-forestry systems, and waste recycling initiatives, women contribute to mitigating climate change and enhancing ecosystem resilience. Additionally, women-led conservation efforts safeguard water resources, prevent soil erosion, and promote reforestation, thereby fostering long-term environmental sustainability. Through their active participation in rubber plantation, women emerge as champions of sustainable development, advocating for environmentally responsible practices and promoting green livelihoods.

##### ➤ *Cultural Roots & Biodiversity Stewardship*

Karbi women have long served as guardians of natural resources. Cultural practices and indigenous knowledge inform their sustainable use of biodiversity. At a biodiversity celebration event, thirty women showcased 101 species of wild edibles; demonstrating both environmental knowledge and cultural identity in traditional foraging and agroforestry.

##### ➤ *Women as Leaders in Sustainability, Conservation & Enterprise*

A prominent panel on International Women's Day 2025 brought together voices from across sectors, conservationists, entrepreneurs, and community leaders to discuss women's roles in biodiversity, resource management, entrepreneurship, and legal empowerment highlights include: -

- Dr. Bandita Teronpi emphasised women's identity as sustainable stewards of nature, reflecting deep cultural wisdom.
- Entrepreneurs such as Charisma Rongpipi and Serleen Engti Katharpi illustrate how women-led micro-enterprises ranging from café initiatives to traditional clothing brands can drive sustainable development and economic equity.
- Jirleen Rongpipi, from Sakhi One-Stop Centre, drew attention to the legal and societal barriers women face highlighted early marriage and lack of access to justice as obstacles to empowerment.

Though they have not directly commented on rubber economy and its sustainable income and prosperity of tribal women & community of the district.

##### ➤ *Rubber Plantation as a Pathway to Women's Empowerment*

- Self Help Groups led Rubber Cooperatives: Encouraging women's SHGs members to manage community rubber plots could combine economic opportunity with shared ownership.
- Capacity Building & Market Access: Training (through Pro-Women Training provided by Rubber Board) to women in sustainable cultivation, processing of rubber and enterprise skills can create value-added local industries.



- Cultural Framing & Biodiversity Integration: Embedding rubber plantation within agro-forestry models, in respect of biodiversity and traditional knowledge can ensure ecological sustainability in the district.
- Supportive Policies & Institutions: Linking initiatives to state schemes for women empowerment fosters structural support for women entrepreneurs in rural agrarian contexts. At the same time rubber plantation has been opened a broader avenue for economic empowerment and sustainable development of women of the district.

## V. CHALLENGES AND OPPORTUNITIES:

Despite the transformative potentiality of rubber plantation for women's empowerment, several challenges are to be encountered. Gender disparities in access to land, credit and technology; limit women's participation and hinder their ability to fully benefit from rubber cultivation. Moreover, entrenched social norms and cultural barriers often restrict women's mobility, decision-making authority, and leadership opportunities within the industry. Addressing these challenges requires concerted efforts to promote gender equality, elimination of discriminatory practices and create a suitable environment for women's empowerment in the rubber sector of the district.

Nevertheless, there are significant opportunities to leverage rubber plantation as a vehicle for women's empowerment and inclusive development. Collaborative initiatives involving government agencies, private enterprises, civil society organizations and local communities can facilitate women's access to land, credit, and market opportunities. Investing in women's education, vocational training, and entrepreneurship programs can enhance their capacity to thrive in the rubber industry and beyond. Furthermore, mainstreaming gender-responsive policies and practices into rubber plantation management can promote equitable participation, enhance productivity and ensure sustainability.

## VI. CONCLUSION

Rubber plantation in Karbi Anglong is not just a farming practice, it holds the promise of reshaping rural economies and empowering women. When embedded in community structures, biodiversity stewardship and respectful cultural frameworks, it can become a catalyst for sustainable livelihoods, social equity, and environmental resilience.

In conclusion, women empowerment and rubber plantation are intertwined in a symbiotic relationship that holds immense potential for advancing gender equality, economic prosperity, and environmental sustainability. By harnessing the economic opportunities offered by rubber cultivation and addressing gender disparities within the sector, we can empower women to become agents of change and drivers of inclusive growth. As we strive to build a more equitable and sustainable future, let us recognize the pivotal role of women in

rubber plantation and commit to creating an enabling environment where they can thrive and prosper. Empowering women through rubber plantation is not only a moral imperative but also a strategic imperative for building resilient communities and achieving shared prosperity for generations to come.

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