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Sericulture, Women Empowerment and Government Policy: A Comparative Study of Dhakuakhana and Sualkuchi in Assam

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Article

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Abstract

This study discusses the importance of the sericulture industry in empowering women in Assam, using the example of Dhakuakhana and Sualkuchi (two of the more important hubs of golden silkworm production and weaving). It discusses the role of women in sericulture in increasing their financial autonomy, social presence and influence in their communities. The paper also examines the use of government initiatives, policy implementation, and issues such as poor infrastructure, lack of access to credit, and insufficient marketing systems etc. by utilizing qualitative approach and tools as per the need of the study, the study also attempts to determine the region specific opportunities and constraints of Dhakuakhana and Sualkuchi. The paper will seek to bring out the interplay of gender, rural development, and sustainable livelihood by comparing the traditional and the commercial weaving center, Dhakuakhana and Sualkuchi. Ultimately, it contributes to understanding how sericulture can serve as a catalyst for women's empowerment and inclusive development in Assam.

Introduction

The sericulture industry is a major agro-based industry in Assam and has a dualistic character, functioning simultaneously as a traditional cottage industry and an emerging large- scale industry. The art and method of silk production is known as Sericulture (Sarma, J at all, 2023). Sericulture broadly comprises interlinked activities such as cultivation of silkworm, silkworm rearing, cocoon production, reeling cocoon (yarn production), making and process of fabric, marketing etc. (Ahmed & Ranjan, 2011). Golden Silkworm is the major component of Assam's sericulture industry.Golden Silkworm which is scientifically known as "Antheraea Assamensis, commonly known as Muga in the Assamese language, holds a significant and invaluable place in the socio-cultural and economic sphere of Assam. It has been a crucial part of India's culture and economy for ages and basically it is known world over for its unique properties like natural golden brilliance, a super fine texture which is resilient, has humidity absorption quality thus having a long shelf life (Das, 2022). Assam contributes 99 per cent golden silkworm to its total world production (Das, 2022) and Assamese Muga has received Geographical Indication (GI) Tag in 2007 for its promotion and preservation and also has been granted GI logo for trademark in 2014. Such large numbers availability of golden silkworm encourages sericulture industries in Assam. Dhakuakhana and Sualkuchi are two crucial regions that both contributed prominently to the sericulture industry of Assam and significantly it provides job and earning opportunities specially for women in a large numbers. Dhakuakhana known as "Land of Golden Silkworm", is mostly famous for its raw golden silk production. While Sualkuchi is regarded as the "Manchester of the East" for its sericulture industry and both regions represent Assam for its sericulture industry on a global level.

From a development perspective, the role of sericulture industry is multifaceted. Sericulture industry offers unique opportunities for women empowerment by providing job, financial independence and social recognition etc. It promotes grassroots governance by encouraging women participation in government decision making process of sericulture industry and foster democratic inclusion of women through economic empowerment. Establishment of women centric industries also ensures gender equity. Sericulture industry is also relevant from rural development perspectives as it provides several developmental opportunities to rural areas such as poverty alleviation, infrastructural development, creation of employment opportunities etc. Sericulture industry also reduces internal migration from rural to urban areas by providing economic opportunities in the agricultural setup. Due to its eco-friendly nature, women get opportunities to maintain a close relationship with nature. Thus, it plays a crucial role in the promotion of Eco feminism. Empowering women through sericulture also aligns with Sustainable Development Goal (SDG) 5, i.e. Achieve gender equality and empower all women and girls; and SDG 8 i.e. Decent Work and Economic Growth for all.

The study aims to understand how participation in sericulture can enhance women's economic status, autonomy, and social standing within their communities. Reviewing the role of government policies is also a part of it. By analysing the opportunities and challenges faced by women in the two regions, the study aims to provide insights into the factors that influence their empowerment through sericulture.

Review of Existing Literature and Gap

The review of literature focuses on studies related to muga cultivation and sericulture industry, women's empowerment in Dhakuakhana with comparison to Sualkuchi and how government took approaches for the promotion of sericulture industry in Assam. As per the literature, muga sericulture in Assam has been experiencing a decreased involvement, unstable production, and structural as well as organizational limitations even though it has a high potential of livelihood. Recent research claims that fluctuations in production are caused by the impacts of climate change, floods, insufficient capital, poor insurance coverage, pesticide exposure, and poor commercialization exacerbated by the lack of communication in the delivery of government support (Dekarararajand Borah, 2024; Das et al., 2023).

The use of traditional rearing methods, low rate of technological use, lack of training and financial resources still inhibit productivity and market penetration (Boruah et al., 2024; Bormon, 2022; Chamuah, 2021). Market inefficiencies are still strong, and the middlemen control cocoon trade, rearers get poor returns, and value addition goes to benefit the outside markets like Bhagalpur (Bonia, 2020; Dutta, 2020). Sualkuchi is comparatively developed and has issues with labour, health hazards, lack of yarn, and losing its authenticity owing to the silks replacement, which hurts the market trust (Das and Das, 2022; Singha and Singha, 2020). Although sericulture is generally known as women-friendly and environmentally-friendly with a high employment rate (Ahmed and Ranjan, 2011; Das et al., 2015), the loss of the indigenous knowledge and the lack of engagement among the youth negatively affect its sustainability in the long run (Chakravarty et al., 2015).

Previous studies have highlighted the sericulture industry, primarily focusing on its significance in socio-economic, cultural, agricultural and scientific aspects the study of muga cultivation and sericulture industry is equally relevant in the aspects of women empowerment and not properly addressed in previous studies. This relevance spans into various key subfields such as Gender Studies, Rural Development, Eco feminist Perspectives, Sustainable Livelihood etc. There is limited research comparing established silk centres like Sualkuchi with Dhakuakhana. Existing literature often lacks focus on the specific challenges

and potentiality of these districts for adopting sustainable silk production and supporting women's empowerment. Additionally, all existing studies rarely address about proper government approach, commercialization and marketing system and infrastructure, resource gaps, and skill development that needed to replicate with the changing time.

Objectives of the Study:

The current study includes following objectives:

1. To examine the role of muga cultivation and sericulture industry in women empowerment.

2. To analyse the current status of women participation in muga cultivation and sericulture industry in Dhakuakhana and Sualkuchi.

3. Determine the peculiar opportunities and challenges to each region, prioritizing on effectiveness of government role and policy execution.

4. To investigate government strategies for optimizing muga cultivation and sericulture industry to enhance women's empowerment, gender equity, and sustainable development in Dhakuakhana and Sualkuchi.

Methodology

The study adopts a qualitative and empirical approach based primarily on secondary data sources. Data has been collected from government reports, policy documents, published research articles, books, and other relevant literature on Assam's sericulture industry.

The study also reviews government policies and institutional initiatives to provide contextual insights into the development of the sericulture sector and its role in women's empowerment. The analysis is conducted in a systematic and objective manner using available secondary information.

Study Area:

The area of the study is primarily based on Dhakuakhana and Sualkuchi, region in Assam, India. Dhakuakhana will represent by some specific muga hubs specially the Karha-Charikaria-Champara river basin and Dhakuakhana Development Block (Bantow, Katharbari, Dighala Hilodari, Gobindapur, Amkotia, Jalbhari) and Ghilamara Development Block (Chinai, Dighali, Balioni, Melaki, Raidongia, Sonari Chapori area, Kekuri) etc. and Sualkuchi town, Kamrup Districts, Assam. The study focuses on the regional characteristics of Dhakuakhana and Sualkuchi, highlighting variations in sericulture practices and socio-economic conditions.

Discussion and Findings

Dhakuakhana and Sualkuchi are two crucial regions that both contributed prominently to the sericulture industry of Assam. Dhakuakhana, also known as "Land of Golden Silkworm", is mostly famous for its raw golden silk production. On the other hand, Sualkuchi is regarded as the "Manchester of the East" for its sericulture industry. The muga culture, or the rearing and manufacture of muga silk, has been a traditional practice among the people of Dhakuakhana over the time and the history of muga cultivation in Dhakuakhana region is immemorial. The congenial climatic condition and suitable soil texture bestow it an optimum biosphere enriched host food plants for different sericigenous insects in Dhakuakhana region makes it suitable for muga cultivation. There are about 1 lakh traditional farmers growing Som (Perseabombycina, Kost), the muga food plants, in an area about 1602 hectares of land averaging 0.15 hectare of holding som plantation per family in Dhakuakhana (Ahmed, 2010). The government provides several special projects and departments such as Muga Seed Development Project (MSDP), in 1961 and Research Station on Muga, in 1966 for Dhakuakhana region. Additionally, two reeling units are established at Ghilamara and Dhakuakhana.

Sualkuchi, the commercial silk-hub and weaving centre, a town in Kamrup district is another important place which is considered to be the most important centre of silk production and sericulture industry in Assam. The legacy of Sualkuchi's weaving can be traced back to the 11th century when king Dharma Pal brought 26 families to promote crafting and weaving. Later, Sualkuchi Silk Village was established by Momai Tamuli Barbourah, a Minister of the Ahom kingdom, in the 17th century (Baishya, 2005). Weavers of Sualkuchi maintain their traditional skills along with modern technology in weaving and are able to achieve a global level status in silkworm and sericulture industry. Former chief minister of Assam, Mr. Tarun Gogoi inaugurated a textile park in Sualkuchi. From 2016, Sualkuchi's textile product has a trademark SUALKUCHI'S in proprietorship of Sualkuchi Tat Silpa Unnayan Samiti.

Present Status of Sericulture Industry in Dhakuakhana and Sualkuchi Region

At present, nearly 3 lakhs families are engaged in sericulture industry in Assam (Anon, 2021), where women weavers represent 99.07 percent of total weavers (Handloom Census Report, 2009-10). Due to high level of women's participation, sericulture is considered as a women friendly occupation (Sarma, J., at all, 2023). Sericulture leads to the creation of new business ventures, new jobs, innovative products and services, business start-ups, development of rural areas and increased wealth (Gogoi et al. 2020). Women in these areas have been actively involved in muga cultivation and sericulture for generations. The Dhakuakhana region, where around 10,000 families are engaged in the traditional rearing and production of muga silkworms, earlier produced around 2 lakh muga cocoons per hectare annually (Ranjan, 2010). According to an NGO named Wild Silk Society, North East, about 90% of Muga culture areas of Dhakuakhana are concentrated in the Korha-Charikoria-Champora river basin.

In Dhakuakhana, while both men and women participate in cultivation, the majority of sericulture activities, such as weaving, making dresses, and reeling, are predominantly carried out by women. Men are rarely involved in these tasks. In Sualkuchi weaving skills are transferred from one generation to the next generation. The entire family gets involved in the value chain of weaving (Baishya, M., 2016). Both men and women are actively engaged in sericulture with women comprising approximately 60% of the workforce. In Sualkuchi there are approximately 13,752 handlooms and approximately 12,056 weavers, out of which 6,872 are female weavers (Singh & Singh, 2020). Around 80% of the master weavers of Sualkuchi block, those who trained the weavers, are women. Women weavers of Sualkuchi earn only around 6500 to 10,000 INR per Month.

Unlike Dhakuakhana, Sualkuchi is not a producer of raw silk but is recognized as an official hub of sericulture industry with a strong focus on commercial production. Historically, women in Dhakuakhana engaged in sericulture to preserve their socio-cultural heritage and traditional practices. However, in recent years, commercialization has become a motivating factor, contributing to the growth of the sericulture industry in the region. This shift has led to increased participation of women, further promoting their empowerment across both Dhakuakhana and Sualkuchi. The sericulture industry in Assam has the potential to significantly contribute to the state's economy and employment generation. Preserving its rich cultural heritage as well as traditional or indigenous practices not only contributes to the local economy but also plays a crucial role in empowering women, who constitute a significant portion of the workforce in this sector. In Dhakuakhana, women have always played an indispensable role in this industry. They provide at least 50% of the contribution through direct participation in the entire activity. At current market prices, muga silk that is reared in one hectare plantation can generate a total product value of Rs.10 lakhs (approximately 15,000 US dollars) in a year (Dutta, 2020).

The following map illustrates the regions of Sualkuchi and Dhakuakhana, highlighting the spatial distribution and clustering of villages of Dhakuakhana engaged in Muga silk cultivation:

Government Roles in the Growth and Promotion of Sericulture Industry in Assam with the Special focuses on Dhakuakhana and Sualkuchi Regions

The government has introduced countless efforts and initiatives for the growth and development of the golden silkworm and sericulture industry over the years. Assam Textile Institute (ATI), established in 1920 by Late Rai Bahadur Kanaklal Baruah, was the first technical institute in the region. It has contributed to sustainability and socio-economic development through its textile education programs.The Assam Sericulture (Silk-worm Seed, Cocoon and Silk Yarn Control) Act, 1987. This act governs the cultivation of silkworms, and includes penalties for non-compliance. Different Government Departments and agencies such as Director of Handloom and Textile Assam, Director of Sericulture at District levels etc. are also there in Assam which are directly or indirectly related to sericulture. Central Silk Board (CSB), under Ministry of Textiles is the nodal agency for the development of silk industry in India. CSB initiated several schemes in Assam like, Cluster Promotion Programmed for Handlooms, Integrated Sericulture Development Project, Muga Silk Development Scheme etc. The government initiated several schemes and policies like North East Region Textile Promotion Scheme (NERTPS), State Handloom Policy, Assam 2017, Textiles & Apparel Policy, Assam 2018, Chief Minister’s Sericulture Development Scheme for providing financial assistance. Assam Silk Industry Development Scheme for financial assistance and reeling, weaving, spinning units, Assam Silk Outreach Mission for marketing and branding promotion, Sericulture Training and Demonstration Scheme for Provide training, Handloom Textile & Sericulture Scheme, providing loans and subsidies, promotion of Self-Help Group (SHG).

Additionally, some of the Schemes that have been facilitated by Government of India for Handloom Weavers and the Handloom and Khadi Weavers include, Aam Aadmi Bima Yojana, The National Handloom Development Programme (NHDP), The Mahatma Gandhi Bunker BimaYojana (MGBBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY). All these efforts of the government have both positive and negative impacts. In positive Assam’s sericulture industry got global prominence and had great impact from the sides of economic perspectives and also spread cultural significance. But all these efforts still the muga cultivation and sericulture industry faced several challenges, which need to be overcome. In the recent years, Assam has witnessed a slew of measures taken by the government for uplifting the sector with value chain addition.

Opportunities and Challenges of Sericulture Industry in Dhakuakhana and Sualkuchi Region:

Opportunities

The sericulture industry in Assam has significant potential because of its distinctive agro-climatic conditions and biodiversity, which are conducive to the cultivation of both mulberry and non-mulberry silk varieties. This is an industry that not only makes the production of quality silk easy but also triggers rural employment especially women and smallholder farmers with sustainable practices. The blending of traditional knowledge with technological developments in modern times can help Assam to significantly improve the quality of silk and the efficiency of silk production, which will enable the company to become even stronger in the national and global markets.

Sericulture Industry is an ideal occupation for women in rural areas of Assam and specially Dhakuakhana and Sualkuchi regions. Sericulture fosters inclusive development opportunities for women by contributing to the improvement of their socio-economic conditions, enhancing financial independence, strengthening their capacity to participate in decision-making processes within the family and society, and enabling them to preserve and transmit cultural traditions such as:

Employment opportunities of Women

Sericulture offers multiple employment opportunities especially for women, from rearing, reeling weaving to making dresses. Presently, about 60% of total working force contributing in sericulture as worker in raising food plants, leaf collection, silkworm rearing, reeling/spinning and weaving is women in Assam (Director of Sericulture Assam).This not only provides a source of income but also contributes to their financial independence and overall empowerment.

Enhanced Economic growth of Women

By engaging in sericulture, women generate their income, by use low Investment, they earns high returns Boost to Local Economy, gets market opportunities, and sericulture has become a vital source of livelihood, strengthening local economies and promoting rural industrialization.

Social recognition of Women

Sericulture provides women with a sense of purpose and achievement, boosting their self-esteem and social standing. It leads inclusive development for women such as Financial Independence, Enhanced Social Status, Improved Education and Health, Collective Strength, Reduction in Migration of women.

Preservation of Assamese traditional practices

Sericulture is deeply rooted in Assamese's cultural heritage. By Protection of Indigenous Knowledge, Intergenerational Skill Transfer, Eco-Friendly Production, Strengthening Cultural Identity, it preserved culture and sustainable development goals.

Indoor nature of work

A significant portion of sericulture activities such as rearing, reeling are predominantly indoor oriented tasks and it helping women to maintain balance between their household responsibilities and occupational based sericulture activities.

Precision and care

Silkworms are sensitive insects that should be taken care of very well. Women are usually keen to detail, patient and consistent qualities that are needed to deliver high quality silk. Their participation has a direct positive effect on productivity and product value.

Also, the Market analysis indicates that the world is increasingly seeking eco-friendly and ethically made silk products and this offers Assam a chance of exploiting the niche markets. The involvement of the public in collaboration with the companies and encouraging value addition by using downstream processing can make the industry more profitable and increase market penetration. Focusing research and development in other fields like disease management, methods of mulberry farming and post-harvest solutions will guarantee long-term sustainability and competitiveness of the industry in the global market.

Challenges

The sericulture industry faces a spectrum of multifaceted issues that prove to be detrimental to the productivity and economic growth of the muga cultivators and weavers. These are systemic and deep-seated, including the technological, financial, infrastructural and even social factors. The usage of the modern technology is minimized, and the exposure to the high-quality sericulture is limited, which limits the possibilities of the cultivators and weavers to enhance the quality and quantity. Lack of effectiveness in marketing and commercialization strategies additional limit access to lucrative markets and infrastructural insufficiency reduces efficiency in operations. Lack of finances and inadequate support by the government acts as a hindrance to the need to invest in high-quality tools and inputs, and the absence of the training opportunities to develop skills, which is the key to innovation and quality improvement. Intermediaries will interfere with proper pricing mechanisms and this will diminish direct benefits to producers. More so, the fading popularity of the younger generation in sericulture, and a threat to the sustainability of the industry as a whole is the competition with other or fake silk products. These problems are worsened by the increasing cost and illiteracy which form a complicated situation requiring holistic interventions. There are obstacles that are specific to the region.

Climate change and frequent floods are some of the forms of environmental unfriendliness in Dhakuakhana that impact the crop production and the sustainability of sericulture. Even though pesticides are aimed at crop protection, its usage has resulted in a low productivity level showing that safer and more effective methods of pests management are required. Lack of good commercial incentive inhibits the generation of income and family obligations limit the labour force making it difficult to have the ability to continue taking part in sericulture. Contrarily, Sualkuchi region is experiencing economic problems that have low profit margins and lack of market knowledge that discourage strategic decisions and development in the industry. Delays in payments and inconsistent working hours upset the working capital and labour force. The undermined quality of raw silk and increasing rivalry of the power loom production also undermine the economic strength of traditional weavers. These regional problems highlight the need to have a localized response that will help to solve similar and specific problems in each region before the muga sericulture industry can be revitalized accordingly.

Significance of the Study

The study has a high level of relevance in a number of aspects. It deals with the most critical sectors like women empowerment, rural economic growth and sustainable livelihoods which are shortcomings in regional and national policy frameworks of government. The study can present useful information to the policy makers interested in enhancing gender equality in the rural sectors by examining the obstacles women encounter in the mugas cultivation and sericulture sector; these barriers may include access to training, credit, and markets. The results may be used in developing specific policies that facilitate the role of women in sericulture so that they can be equipped with resources and skills on how to be more productive. Also, the research is in line with other objectives in sustainable rural development, in that it promotes the utilization of local resources and traditional knowledge. The government can ensure that it contributes to the inclusive and sustainable development of Assam through supporting policies to empower women in this sector to boost the silk industry but also enhancing the socio-economic status of women in the region.

Additionally, study has a high social relevancy because it will draw attention to the socio-economic status of women. Sericulture, specifically rearing of golden silkworms (Muga silk) in Assam has a great deal of concern with culture and economic significance. Limited resources, training and market opportunities, however, have seen women under exploiting their potential contribution to this sector. The study targets to investigate how women can be empowered economically and socially by building skills in the production of golden silk by targeting these districts. The empowerment of women in sericulture may lead to independence in money, raising their social status, and having more decision-making power at home and in society. Participation by women in sericulture may also contribute to the stability of the family as the production of silk is a good source of income. The same can also be used to encourage sustainable ways of livelihoods through the use of local resources and traditional skills. The research can be used to influence policy interventions by highlighting the obstacles and opportunities, so that the model of inclusive sustainable development of rural women in Assam can be realized. However, women empowerment in this conventional industry, in the end, would lead to gender equality, poverty alleviation, and the maintenance of Assam's unique culture.

Conclusion

Assam, and especially the Dhakuakhana and Sualkuchi regions have a large sericulture industry, which has enormous potential in empowering women, developing rural areas, and providing sustainable livelihoods. Sericulture can be used to improve the economic and social aspects of women and decision-making, by combining the traditional practices with the latest developments and governmental assistance. Although there are challenges like infrastructural gaps, financial constraints and market inefficiencies, there are specific policy interventions and region-specific strategies that can effectively solve the challenges. Enhancement of training, access to markets and environmental friendly activities will conserve the rich cultural heritage of Assam and inclusive growth in tandem with the national and global development policies and strategic plans such as government subsidies and infrastructure creation will spur development in this sector. Finally, empowerment of women through sericulture has the potential of advancing gender equity, poverty alleviation and maintained socioeconomic establishment of such communities, and the long term sustainability and success of the Assam golden silk industry.

Declarations

Ethical Approval

This article does not contain any studies with human participants or animals performed by any of the authors. The study is based entirely on secondary data obtained from publicly available sources.

Informed Consent

Not applicable.

Conflict of Interest:

The authors declare that there is no conflict of interest regarding the publication of this paper.

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Author Contribution

Romanch Burha Gohain and Dhruba Jyoti Gogoi designed the study. R. Burha Gohain collected the data and drafted the manuscript. Dhruba J Gogoi contributed to analysis, interpretation, and revision of the manuscript. All authors reviewed and approved the final manuscript.

Data Availability

https://nenow.in/north-east-news/dhakuwakhana-muga-rich-zone-north-east.htmlhttps://indianexpress.com/article/north-east-india/assam/muga-waste-finds-a-new-thread-of-life/

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20. Director of Sericulture Lakhimpur District, Assam
21. Director of Sericulture Dhemaji, Assam

Figures

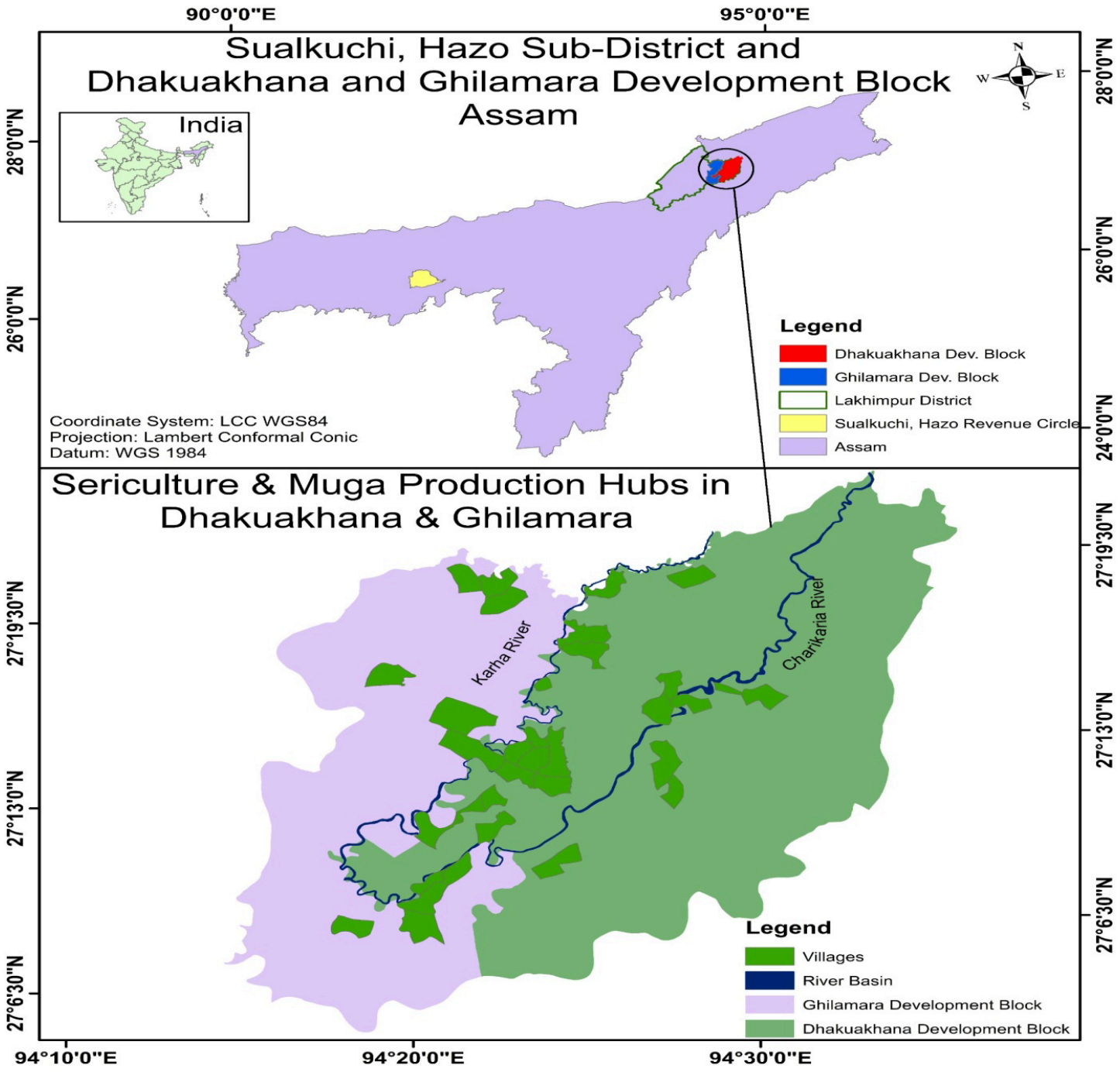


Figure 1

Unnumbered image in the Methodology section.

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