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Dynamics of change among traditional pastoral communities in Tamil Nadu, India: A case study

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Abstract

This study explores the dynamics of change among traditional pastoral communities in Tamil Nadu, India, focusing on their livelihoods and income generation strategies. Through a field survey conducted in Madurai district, we gathered qualitative and quantitative data from interviews, focus group discussions, and direct observations with 15 key informants and 3 focus groups. Our findings reveal significant shifts in pastoral practices, driven by factors such as reduced pastureland, government restrictions, and socio-economic pressures. Many herders have transitioned to other occupations, citing low income, lack of social recognition, and health issues as primary deterrents. However, initiatives by NGOs like SEVA and community organizations such as KIDAI show promise in reviving and sustaining pastoral practices through education, insurance support, and value-added product development. The study highlights the critical role of traditional pastoralism in biodiversity conservation and climate resilience, underscoring the need for policies that support sustainable pastoral livelihoods and protect grazing lands. Our research suggests that enhancing community engagement, promoting value-added products, and securing grazing rights are essential for the revival and sustainability of pastoralism in Tamil Nadu.

Keywords: Pastoral communities, livelihood dynamics, traditional livestock farming, socio-economic change, biodiversity conservation, Tamil Nadu

Introduction

The pastoral communities in Tamil Nadu, traditionally reliant on livestock herding, have faced significant challenges over the past few decades. These communities are integral to the region's agricultural landscape, contributing to biodiversity, soil fertility, and cultural heritage. However, rapid socio-economic changes, coupled with governmental policies and environmental challenges, have led to a decline in pastoral practices. This study aims to explore the dynamics of these changes, focusing on the livelihood strategies of pastoralists, the factors influencing their transition away from herding, and the potential for revitalizing traditional practices.

Historical Context and Traditional Practices

Pastoralism in Tamil Nadu has a long-standing history, with communities such as the Kuruvikkaran and the Kallar traditionally engaged in sheep and cattle herding. These communities have managed livestock in a manner that not only sustained their livelihoods but also contributed to the ecological balance through practices such as grazing on natural pastures and utilizing dung for soil enrichment (Balachandran, 2015) ^[1]. The pastoralist way of life, deeply embedded in the region's cultural fabric, has historically supported agricultural practices, enhancing soil fertility and biodiversity (Dharmarajan & Subramanian, 2017) ^[2].

Socio-Economic Changes and Challenges

The transformation in the pastoral sector is marked by several socio-economic and environmental factors. The government's focus on promoting agriculture through subsidies and modern farming techniques has often side-lined traditional pastoral practices. This shift has been exacerbated by land use changes, urban expansion, and the conversion of grazing lands into agricultural fields, infrastructure, and industrial areas. Consequently, the availability of grazing lands has significantly reduced, undermining the traditional pastoral system (Kumar & Sharma,

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2019)^[4].

Additionally, the introduction of restrictive policies, such as the Forest Conservation Act, has limited herders' access to forest areas for grazing, further straining their livelihoods. These policies have not only reduced the grazing land but also increased the vulnerability of pastoral communities to economic instability and social marginalization (Government of India, 2017)^[3].

Health and Societal Factors

The decline in pastoralism has also been influenced by health-related challenges faced by herders, including occupational hazards and diseases common among livestock keepers. Lack of access to veterinary services and the frequent outbreak of diseases like 'Kanai' and 'Ammal' have compounded these issues, making animal husbandry less viable. Moreover, the societal perception of pastoralism has diminished, with many young people viewing herding as an unappealing and low-status occupation, leading to a decline in the number of new entrants into the profession (Vivekanandan, 2018)^[7].

Research Gap and Study Rationale

While several studies have documented the challenges faced by pastoral communities in various parts of India, there is a paucity of research specifically addressing the nuances of these issues in Tamil Nadu. Existing literature highlights the general decline in pastoral practices and the loss of traditional knowledge (Rajiv Gandhi, 2020)^[5]. However, there is limited understanding of the specific factors driving this decline and the potential for revitalizing pastoralism through community-based approaches and policy interventions.

This research seeks to fill this gap by examining the current state of pastoral communities in Madurai district, identifying the key drivers of change, and exploring sustainable solutions to support and revitalize traditional pastoral practices. The study's findings aim to inform policymakers, development practitioners, and community organizations about the critical need to preserve and enhance the pastoral way of life, ensuring its sustainability and relevance in the contemporary socio-economic landscape.

Objectives of the Study

1. To analyze the socio-economic and environmental factors contributing to the decline of pastoralism in Tamil Nadu.
2. To document the experiences and perspectives of traditional pastoralists regarding their livelihoods and challenges.
3. To evaluate the role of current policies and initiatives by NGOs and community organizations in supporting pastoral communities.
4. To explore sustainable practices and strategies that can enhance the resilience and viability of pastoral livelihoods.

Through a comprehensive examination of these aspects, this study aims to contribute to the broader discourse on sustainable development, biodiversity conservation, and the preservation of traditional knowledge systems in India.

Methodology

The field survey aimed to understand the dynamics of change among traditional pastoral communities in Tamil Nadu, focusing on livelihood and income generation. Our methodology included both qualitative and quantitative approaches to gather comprehensive data and insights.

Study Area

The study was conducted in various villages within the Madurai district of Tamil Nadu, known for their historical significance in traditional pastoralism. The primary villages surveyed included T. Krishnapuram, Athipatti, Peraiyur, and Vadapalanchi. These locations were chosen based on their active pastoral communities and the presence of herders who have experienced significant changes in their livelihoods.

Data Collection

1. Participant Selection

- A purposive sampling method was used to select participants. This ensured that we included individuals with diverse experiences and perspectives on pastoralism.
- Key informants included traditional herders, individuals who have left pastoralism for other occupations, and community leaders involved in pastoral activities.

2. Interviews

- Semi-structured interviews were conducted with selected participants. This method allowed flexibility in probing deeper into specific issues while maintaining a consistent structure across interviews.
- Key questions focused on personal history in pastoralism, reasons for continuing or leaving the profession, challenges faced, and perceptions of future prospects.

3. Focus Group Discussions

- Focus group discussions (FGDs) were organized to gather collective insights and foster discussion among community members. These discussions helped to identify common themes and variations in experiences.
- FGDs were conducted with groups of 6-8 participants, ensuring representation from different age groups and socio-economic backgrounds.

4. Observation

- Direct observation of pastoral activities was carried out to understand the day-to-day practices, challenges, and interactions within the community.
- Field notes were taken during observations to capture contextual details that might not emerge through interviews alone.

5. Secondary Data

- Relevant secondary data was collected from local government records, reports from NGOs like SEVA, and academic studies on pastoralism and agriculture in Tamil Nadu.
- This data provided background information and contextualized our primary findings within broader trends and policies affecting pastoral communities.

Data Analysis

1. Qualitative Analysis

- Interview transcripts and field notes were systematically coded using thematic analysis. This involved identifying key themes, patterns, and relationships within the data.
- NVivo software was used to assist in managing and analyzing qualitative data, enabling us to categorize and link different themes effectively.

2. Quantitative Analysis

- Descriptive statistics were used to summarize demographic information and quantify key aspects of livelihood changes, such as herd sizes, income levels, and employment shifts.
- Where applicable, simple statistical tests were employed to identify significant differences and correlations between

variables.

Limitations

1. **Sample Size:** The sample size, while sufficient for qualitative insights, may not be representative of the entire pastoral community in Tamil Nadu. The findings should be interpreted with this consideration.
2. **Self-Reporting Bias:** Data collected through interviews relies on participants' self-reports, which may be influenced by recall bias or social desirability bias. Cross-verification with observational data helped mitigate this limitation.
3. **Geographical Scope:** The study focused on specific villages within Madurai district, and the findings may not be generalizable to other regions with different socio-economic and environmental contexts.

By employing a mixed-methods approach, this study provides a holistic understanding of the challenges and changes faced by traditional pastoral communities in Tamil Nadu. The integration of qualitative insights and quantitative data ensures a comprehensive analysis, informing policy recommendations and future research directions.

Results

Case Study 1: Mr. Pullarmoorthy

Mr. Pullarmoorthy, a resident of T. Krishnapuram, transitioned from animal herding to working in the textile industry. After losing his job during the COVID-19 pandemic, he returned to animal herding, albeit on a smaller scale. Key challenges he identified include:

1. **Reduced Pasturelands:** The disappearance of communal grazing lands, locally known as 'Vettukadu'.
2. **Restrictions in Forest Areas:** Prohibition by the Forest Department on grazing in forest areas.
3. **Water Scarcity:** Decline in small water bodies like ponds, essential for large herds.
4. **Encroached Pathways:** Loss of traditional pathways for animal movement due to encroachments.

Case Study 2: Mr. C. Ravichandran

Mr. Ravichandran transitioned from herding to operating a JCB machine. Despite initial investments in both animal herding and machinery, he eventually found herding unprofitable due to:

1. **Insufficient Remuneration:** Earnings from herding were not enough to sustain a family.
2. **Labor Intensive:** The demanding nature of herding with no holidays.
3. **Health Issues:** Common health problems among herders, such as kidney stones.
4. **No Compensation:** Lack of insurance or compensation for animal loss.
5. **Rising Costs:** Increased cost of living and labor in rural areas.

Case Study 3: Mr. Arumugam

Mr. Arumugam's family transitioned from herding to salaried employment and rearing a small number of sheep as a supplementary income. Key insights include:

1. **Social Recognition:** Low social status of herders discourages youth from continuing the practice.
2. **Economic Pressures:** Need for regular income to meet modern lifestyle demands.
3. **Policy Awareness:** Lack of awareness about governmental policies and benefits.

NGO Interventions

Dr. Vivekanandan of SEVA (Sustainable Environment-friendly Agriculture through Voluntary Action) highlights efforts to document and promote indigenous livestock breeds and traditional knowledge. SEVA's activities include:

1. **Training Programs:** Educating herders on herbal treatments for livestock diseases.
2. **Capacity Building:** Empowering herders through self-help groups and innovation networks.
3. **Policy Advocacy:** Helping herders navigate policy changes and access benefits.

Results

The survey conducted across various pastoral communities in Tamil Nadu revealed significant insights into the challenges and dynamics affecting traditional livestock herding practices.

Decline in Pastoral Practices

1. **Reduction in Pastureland:** Traditional grazing lands, known locally as 'Vettukadu', have significantly diminished. The encroachment of these lands for agricultural and infrastructural development has drastically reduced the availability of grazing areas. This scarcity has forced many herders to reduce their livestock numbers or abandon herding altogether. Ravichandran's transition from a herder to a JCB operator exemplifies this shift due to the unavailability of grazing lands and the search for more lucrative employment.
2. **Forest Grazing Restrictions:** The Tamil Nadu Forest Department has imposed strict regulations prohibiting livestock grazing in forested areas. These restrictions, aimed at conserving forest biodiversity, have inadvertently impacted traditional herders who relied on these lands for seasonal grazing. This has led to a significant reduction in herd sizes, as observed in the cases of Mr. Pullarmoorthy and Mr. Murugan.
3. **Water Scarcity:** The disappearance of small water structures like ponds and tanks has compounded the challenges faced by herders. The lack of reliable water sources makes it difficult to sustain large herds, further discouraging traditional practices. This issue was highlighted by Mr. Pounraj, who mentioned the increased difficulty in providing water to cattle, especially during dry seasons.

Socio-Economic Factors

1. **Economic Viability:** The economic returns from livestock herding have not kept pace with rising costs of living and inflation. Herders like Mr. Ravichandran and Mr. Arumugam cited inadequate remuneration and the high costs of maintaining livestock, including feed, healthcare, and labor. This economic strain pushes younger generations towards alternative, higher-paying jobs.
2. **Health and Labor Issues:** Health problems such as kidney stones, attributed to inadequate water consumption during long grazing periods, have been common among herders. Additionally, the non-availability of labor and increased labor costs make it difficult for herders to manage their livestock. The labor costs have escalated, making it unfeasible for many to continue traditional herding practices.
3. **Social Recognition and Lifestyle Changes:** The social status of herders has diminished over time, leading to a lack of interest among younger generations in continuing this

traditional livelihood. The perception of herding as a low-status occupation with hard labor and no holidays has driven many, like Mr. Ravichandran and Mr. Arumugam's sons, to seek education and salaried jobs in urban areas.

Environmental and Policy Implications

- 1. Biodiversity and Soil Health:** Despite the challenges, the ecological benefits of pastoral practices are significant. Grazing and penning contribute to soil fertility and carbon sequestration, as noted by Dr. Vivekannadan of SEVA. These practices help maintain soil health and biodiversity, crucial for sustainable agriculture. The traditional knowledge and methods of pastoralists, if supported, can play a vital role in promoting organic and natural farming initiatives.
- 2. Policy Support:** There is a critical need for policy interventions to support pastoral communities. Initiatives such as providing grazing permits, developing insurance schemes for livestock, and recognizing the ecological contributions of herders can help sustain this traditional livelihood. Organizations like SEVA and Kidai are working towards empowering herders through awareness and support programs, but broader policy measures are required to make a substantial impact.

Discussion

The findings from our field survey highlight the multifaceted challenges faced by traditional pastoral communities in Tamil Nadu. The gradual decline of pastoralism, as observed through the experiences of individuals like Mr. Pullarmoorthy, Mr. C. Ravichandran, and Mr. Arumugam, reflects a broader socio-economic and environmental crisis that demands comprehensive understanding and intervention.

Environmental Degradation

One of the most pressing issues impacting pastoralism is the degradation and reduction of pasturelands. Traditionally, these communal grazing areas, known as 'Vettukadu', were vital for sustaining large herds. However, rapid urbanization and infrastructural development have encroached upon these lands. In particular, the expansion of cities like Madurai has led to the conversion of grazing lands into construction sites for roads, universities, and IT parks. This encroachment not only restricts the movement of animals but also forces herders to travel greater distances in search of suitable grazing areas, thereby increasing the labor and cost associated with herding.

Additionally, forest department policies have exacerbated the problem by prohibiting grazing in forest areas, historically used by herders during dry seasons. This restriction, coupled with the disappearance of small water bodies like ponds, has made it increasingly difficult to sustain large herds. The environmental changes have had a cascading effect on the viability of pastoralism as a livelihood, compelling many herders to reduce their herd sizes or abandon the practice altogether.

Socio-Economic Pressures

The socio-economic landscape has also shifted significantly, influencing the decisions of herders to leave their traditional occupations. Modern educational aspirations and the desire for a more stable and higher income have driven younger generations away from pastoralism. Mr. Pullarmoorthy and Mr. Ravichandran's experiences illustrate this trend, where individuals equipped with education and skills sought employment in urban areas, only to return to herding as a

fallback during economic downturns like the COVID-19 pandemic.

Economic viability is a critical factor in this shift. Herders reported that the remuneration from animal herding is insufficient to support a family, especially when compared to other available occupations. For instance, Mr. Ravichandran found greater financial security and stability as a JCB operator, earning a substantial daily wage and later investing in his own machinery. This economic pressure is compounded by the rising cost of living in rural areas, where expenses related to education, healthcare, and communication have surged.

Health and Labor Issues

Health concerns are another significant deterrent to continuing pastoral practices. Herders frequently suffer from kidney stones due to inadequate water intake, a consequence of the demanding nature of their work. The lack of medical support and veterinary care further exacerbates the situation, making pastoralism a less attractive option for the younger generation.

Labor availability and cost are also critical issues. The traditional practice of employing laborers to assist with herding is becoming increasingly unsustainable due to rising wages. Mr. Lakshmanan's account underscores this challenge, as he needs to employ multiple laborers to manage his herd, with each laborer's costs including daily wages, meals, and annual bonuses.

Policy and Social Recognition

The low social status associated with pastoralism deters many from continuing the tradition. As Mr. Arumugam noted, the lack of social recognition and the perception of herding as an inferior occupation push the youth towards other professions. This social stigma is compounded by the economic model of pastoralism, where income is irregular and dependent on seasonal cycles, contrasting sharply with the immediate financial needs of modern lifestyles.

Awareness and implementation of policies are also lacking among herders. Many are unaware of existing government programs that could support their livelihoods, such as insurance schemes for livestock. NGOs like SEVA and initiatives like Kidai are crucial in bridging this gap by educating herders about policy changes, advocating for their rights, and providing training to diversify their income sources.

Opportunities and Future Directions

Despite these challenges, there are emerging opportunities that could revitalize pastoralism. The increasing demand for organic and natural farming methods, which rely heavily on traditional practices like animal penning, presents a potential market for herders. Products derived from pastoralism, such as A2 grade milk, cow dung-based fertilizers, and traditional breeds for sport and milk production, have shown promising demand.

To harness these opportunities, a multi-pronged approach is necessary. This includes:

- 1. Policy Interventions:** The government should implement and enforce policies that protect grazing lands and support sustainable pastoral practices. Providing insurance and compensation for livestock loss, improving veterinary services, and creating awareness about existing schemes are crucial steps.
- 2. Economic Support:** Financial incentives and support for herders to diversify their products and improve market access can make pastoralism more economically viable. Encouraging value addition and direct marketing of pastoral

products can enhance income stability.

3. **Social Recognition:** Initiatives to elevate the social status of herders, such as recognizing their contributions to sustainable agriculture and biodiversity, can attract younger generations to the profession.
4. **Environmental Conservation:** Collaborative efforts with environmental organizations to conserve and restore grazing lands, coupled with research on the role of pastoralism in carbon sequestration and biodiversity, can highlight the ecological benefits of traditional herding practices.
5. **Education and Capacity Building:** Training programs focused on modern animal husbandry techniques, health management, and sustainable practices can equip herders with the knowledge to adapt to changing conditions while preserving traditional wisdom.

In conclusion, the transformation of traditional pastoral communities in Tamil Nadu is a complex interplay of environmental, socio-economic, and cultural factors. Addressing these challenges requires coordinated efforts from the government, NGOs, and the communities themselves. By leveraging the strengths of traditional practices and integrating them with modern support systems, pastoralism can be revitalized as a sustainable livelihood in the region.

Conclusion

The transformation of traditional pastoral communities in Tamil Nadu reflects broader changes in rural livelihoods and environmental management. Understanding these dynamics is essential for developing policies that support sustainable agricultural practices and preserve cultural heritage. Further research should focus on long-term strategies to integrate traditional knowledge with modern agricultural practices for holistic rural development.

The study underscores the urgent need for policy interventions that recognize the intrinsic value of pastoralism in sustaining biodiversity and enhancing soil fertility. It advocates for the establishment of supportive frameworks that provide economic incentives, education, and health services to pastoral communities. By integrating traditional knowledge with modern practices, there is potential to transform pastoralism into a resilient and sustainable livelihood, contributing to both ecological health and economic stability in Tamil Nadu. This research calls for collaborative efforts among government bodies, NGOs, and local communities to safeguard and rejuvenate pastoral traditions, ensuring their place in the future of India's agricultural landscape.

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