

Community-Based Tourism and Social Cohesion: Evidence from Chakrasila Wildlife Sanctuary and the Rise–Loop–Star–Seed Integrated Model

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ABSTRACT

Community-Based Tourism (CBT) has gained prominence as a participatory pathway for sustainable development, particularly in ecologically and culturally sensitive regions. This study examines the influence of CBT on social cohesion, cultural preservation, and community participation in Chakrasila Wildlife Sanctuary, Assam; an indigenous socio-ecological landscape known for its Golden Langur habitat. Using a mixed-method approach, primary data were collected from 237 tourists and 60 local community members. Reliability analysis, factor analysis, correlation, and chi-square tests were employed to examine socio-cultural relationships.

The findings indicate that CBT is significantly associated with high levels of social cohesion by enhancing trust, cooperation, collective identity, and participation in community decision-making. Cultural practices such as festivals, weaving, and traditional performances have experienced revitalisation through tourism engagement, while governance participation has increased through collective tourism planning and conservation activities. A strong positive relationship is observed between CBT participation and social cohesion, confirming the central role of community-driven tourism in fostering social sustainability.

Based on empirical insights, the study proposes the RISE–LOOP–STAR–SEED Integrated Model, a cyclical framework that integrates resilience, participatory governance, social cohesion, cultural continuity, and sustainable enterprise development. The model offers a transferable framework for strengthening socially cohesive and community-driven tourism in protected and indigenous regions. The study contributes to sustainable tourism literature by foregrounding social cohesion as a central mechanism linking community empowerment, cultural preservation, and long-term destination sustainability.

Keywords: Community-Based Tourism; Sustainable development; Social Cohesion; Chakrasila Wildlife Sanctuary; Cultural Preservation; Integrated Model.

INTRODUCTION

Community-Based Tourism (CBT) represents an alternative tourism development approach that places local communities at the centre of planning, ownership, and benefit-sharing. Rooted in participatory development theory, CBT aligns with principles of inclusive growth, cultural integrity, and environmental stewardship. Unlike conventional tourism models that often marginalise host communities, CBT emphasises collective decision making, equitable distribution of benefits, and local control over tourism resources.

Despite the growing body of literature on Community-Based Tourism (CBT), existing studies have predominantly focused on its economic benefits, livelihood diversification, and conservation outcomes, often treating social dimensions as secondary or descriptive variables. While concepts such as community participation and empowerment are frequently discussed, social cohesion that is understood as trust, cooperation, collective identity, and shared governance remains under-theorised and is insufficiently examined through empirical measurement. Moreover, much of the CBT literature relies on case illustrations or

qualitative narratives, with limited integration of validated quantitative constructs to examine how social cohesion is generated and sustained through tourism processes.

In the context of India's Northeast, research on CBT has largely concentrated on prominent destinations, leaving ecologically sensitive yet culturally rich landscapes such as Chakrasila Wildlife Sanctuary relatively underexplored. Existing studies in Assam primarily highlight conservation awareness and economic participation but provide limited empirical insight into how community-driven tourism reshapes social relations, cultural continuity, and collective action within indigenous communities. This gap is particularly significant in protected areas where social cohesion plays a critical role in balancing conservation imperatives with livelihood needs.

Addressing these gaps, the present study empirically examines the relationship between community-based tourism and social cohesion in Chakrasila Wildlife Sanctuary using a mixed-method approach. By foregrounding social cohesion as a central analytical construct and synthesizing quantitative evidence with thematic insights, the study advances understanding of CBT as a socially embedded development process. Further, it proposes the RISE-LOOP-STAR-SEED Integrated Model as an empirically informed framework to conceptualize the cyclical linkages between participation, governance, cultural preservation, and sustainable enterprise development in indigenous and conservation-sensitive contexts.

LITERATURE REVIEW

Conceptual Foundations of Community-Based Tourism

CBT is grounded in participatory development and empowerment theory, emphasising community ownership, collective agency, and shared benefits. Murphy's community approach highlights that tourism initiatives are more sustainable when residents act as partners rather than passive recipients. Okazaki extends this perspective by integrating participatory governance frameworks, arguing that meaningful CBT requires power-sharing and institutional collaboration. Scheyvens' empowerment framework further explains how tourism contributes to economic, psychological, social, and political empowerment at the community level.

Across sustainability literature, CBT is positioned as an alternative to mass tourism, particularly suited to rural, indigenous, and conservation-sensitive regions due to its emphasis on cultural identity, local knowledge, and environmental responsibility.

Social Cohesion and Cultural Preservation in CBT

Social cohesion that is defined by trust, reciprocity, collective identity, and cooperation, emerges as a critical outcome of CBT. Tourism activities that require collective organisation, such as festivals, homestays, and community guiding, strengthen interpersonal networks and social capital. Empirical studies demonstrate that CBT revitalises cultural practices, encourages intergenerational knowledge transfer, and reinforces community pride.

Rather than eroding local culture, well-managed CBT often functions as a cultural safeguard by revaluing traditional arts, rituals, crafts, and cuisines. However, literature also cautions that without community control, tourism can lead to cultural commodification, underscoring the importance of participatory governance.

Governance, Livelihoods, and Conservation

CBT contributes to livelihood diversification through home stays, guiding services, handicrafts, and cultural enterprises. These economic gains are closely linked to improved education, healthcare access, and household resilience. Effective governance structures characterised by transparency, inclusion, and institutional support are essential for sustaining these benefits and preventing elite capture.

In conservation contexts, CBT enhances pro-environmental behaviour by linking tourism benefits to biodiversity protection. Community-managed ecotourism has been shown to reduce dependence on extractive activities and foster stewardship of wildlife and habitats.

CBT in Northeast India and Assam

Across Northeast India, CBT initiatives in Sikkim, Nagaland, Meghalaya, Arunachal Pradesh, and Manipur demonstrate strong linkages between cultural identity, conservation ethics, and community solidarity. In Assam, destinations such as Majuli, Kaziranga, and Manas illustrate how community participation in tourism can support cultural revival and conservation outcomes.

Chakrasila Wildlife Sanctuary remains under-researched despite its ecological significance. Existing studies suggest that tourism in the region has increased conservation awareness, women's participation through self help groups, and community unity. However, empirical analysis focusing on social cohesion outcomes remains limited, creating a clear research gap.

METHODOLOGY

Research Design and Sampling

The study adopted a quantitatively driven mixed-method design, with qualitative insights used for contextual triangulation rather than in-depth ethnographic inquiry. Primary data were collected between 2022 and 2024 in villages surrounding Chakrasila Wildlife Sanctuary.

A total of 60 community respondents were selected through purposive sampling, focusing on individuals actively involved in tourism-related activities such as homestays, guiding, handicrafts, cultural performances, and community tourism governance. This ensured informed perspectives on CBT processes and outcomes.

Additionally, 237 tourists were surveyed using convenience sampling, based on on-site accessibility and time constraints typical of protected area research settings. While this approach enabled the capture of visitor perceptions, it is acknowledged as a limitation affecting the generalizability of tourist-related findings beyond the study context.

Data Analysis

Data were analysed using SPSS (Version 28). A structured questionnaire was prepared that consisted of multiple sections measuring key constructs relevant to community-based tourism and social cohesion. All items were measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

The community-based tourism benefits were measured through items related to livelihood enhancement, income diversification, skill development, and empowerment (e.g., "Tourism has improved income opportunities for my household").

Social Cohesion included items capturing trust, cooperation, collective identity, and mutual support (e.g., "Tourism activities have strengthened trust among community members").

Cultural Preservation was measured through participation in festivals, traditional practices, and cultural knowledge transmission.

Community Participation focused on involvement in decision-making, governance, and conservation-related tourism planning.

Qualitative Component: Thematic Analysis of Open-Ended Survey Responses

In addition to quantitative analysis, the study employed thematic analysis of open-ended survey responses to contextualize and triangulate statistical findings. Rather than traditional qualitative methods such as interviews or focus group discussions, this analysis was based on structured open-response questions embedded within the survey instrument.

The responses were inductively coded into five thematic dimensions: economic, cultural, environmental, social, and adventure/recreational engagement. Frequency patterns and interpretive insights were used to support and contextualize quantitative results, acknowledging the exploratory nature of this qualitative component.

Reliability analysis, exploratory factor analysis, correlation, and chi-square tests were conducted at a 95% confidence level. Participation was voluntary, informed consent was obtained, and no personal identifiers were collected.

RESULTS

Reliability and Validity of Constructs

Table 1. Reliability Statistics (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha
Community-Based Tourism (CBT) Benefits	10	0.874
Social Cohesion	8	0.892
Cultural Preservation	6	0.861
Community Participation	5	0.843

(Field Survey 2022 -24)

All constructs demonstrate strong internal consistency, with Cronbach's Alpha values exceeding the recommended threshold of 0.80, confirming the reliability of the measurement scales.

Sampling Adequacy and Factorability

Table 2. KMO and Bartlett's Test of Sphericity

Test	Value
KMO Measure of Sampling Adequacy	0.893
Bartlett's Test of Sphericity	$\chi^2 = 2453.67, p < 0.001$

The high KMO value and statistically significant Bartlett's Test confirm that the dataset is suitable for exploratory factor analysis.

Exploratory Factor Analysis

Exploratory factor analysis using Varimax rotation extracted four factors with eigenvalues greater than one, collectively explaining approximately 70% of the total variance. The factor structure aligns with theoretical expectations of community-based tourism outcomes.

Table 3. Summary of Extracted Factors and Variance Explained

Factor	Description	Percentage of Variance
F1	CBT Benefits (Livelihoods and Empowerment)	32.71
F2	Social Cohesion (Trust and Cooperation)	16.07
F3	Cultural Preservation (Festivals and Traditions)	12.05
F4	Community Participation (Governance and conservation)	9.10
Total Variance Explained		69.93

The extracted factors demonstrate conceptual clarity and strong construct validity, confirming that CBT outcomes in Chakrasila are multidimensional and interrelated.

Relationship Between CBT and Social Cohesion

Table 4. Pearson Correlation Between CBT Benefits and Social Cohesion

Variables	CBT Benefits	Social Cohesion
CBT Benefits	1	0.684**
Social Cohesion	0.684**	1

Note: $p < 0.01$

The correlation analysis reveals a strong and statistically significant positive relationship between CBT benefits and social cohesion, indicating that increased participation in community-based tourism is associated with higher levels of trust, cooperation, and collective identity among residents.

Cultural Participation and Economic Outcomes

The Chi-square test examining the association between participation in cultural festivals and perceived economic benefits yielded a statistically significant result ($\chi^2 = 21.332$, $df = 16$, $p = 0.0266$).

Table 5. Chi-Square Test Between Cultural Participation and Economic Benefits

Statistic	Value
Chi-square (χ^2)	21.332
Degrees of Freedom	16
Significance (p-value)	0.0266

Rather than indicating a strong relationship, the result suggests the presence of an association between cultural participation and perceived economic benefits. This finding supports the observed link between engagement in cultural activities and livelihood outcomes, although the strength and direction of this relationship warrant further investigation through more robust analytical techniques.

Theme-Based Content Analysis of Tourist Engagement

The theme-based content analysis reveals that tourist participation in Chakrasila Wildlife Sanctuary is deeply embedded within community life and local socio-cultural systems. Tourist activities were classified into five thematic dimensions namely: economic, cultural, environmental, social, and adventure/recreational thereby reflecting the multidimensional nature of community-based tourism experiences.

- **Economic engagement** was strongly reflected through activities such as weaving, homestays, traditional food preparation, souvenir purchases, and camping, indicating direct livelihood linkages and income generation for host communities.
- **Cultural participation** emerged as a dominant theme, with tourists actively interacting with homestay families, engaging with indigenous communities, attending cultural performances, and participating in traditional food practices. These interactions reflect demand for authenticity and contribute to cultural preservation and intergenerational knowledge transmission.
- **Environmental engagement** was evident through bird watching, trekking, Golden Langur sighting, and conservation-oriented volunteering, highlighting the role of CBT in promoting environmental awareness and responsible tourism behaviour within a protected area context.
- **Social engagement** was reflected in activities such as shared household routines, wellness and meditation experiences, agricultural participation, and volunteerism, fostering social bonding, mutual learning, and community integration.
- **Adventure and recreational activities**, though cross-cutting, contributed to experience diversification and youth-oriented tourism demand, enhancing the overall economic and recreational value of the destination.

The overall content analysis thus demonstrates that tourist engagement extends beyond consumption-oriented activities to include meaningful social, cultural, and environmental interactions, reinforcing the quantitative findings on social cohesion and community participation.

DISCUSSION

Integrating quantitative results with theme-based content analysis, the study demonstrates that community-based tourism in Chakrasila Wildlife Sanctuary functions as a socially embedded development process rather than a purely economic intervention. Statistical evidence confirms a strong positive relationship between CBT benefits and social cohesion, while thematic findings reveal how this cohesion is produced through everyday economic, cultural, environmental, and social interactions between tourists and host communities.

Hence, social cohesion emerges as a central mechanism linking economic participation with cultural continuity and conservation ethics. The results suggest that when communities retain control over tourism processes, cultural engagement becomes a source of resilience rather than commodification.

INTEGRATED RISE–LOOP–STAR–SEED MODEL

The RISE–LOOP–STAR–SEED Model conceptualises CBT as a cyclical and adaptive system, synthesizing empirical findings with conceptual insights derived from the mixed-method analysis.

The empirical basis of the model is reflected in the quantitative results:

Fig: 1 The Integrated RISE – LOOP – STAR - SEED Model



(Source: Author’s conceptualization, 2024 -25)

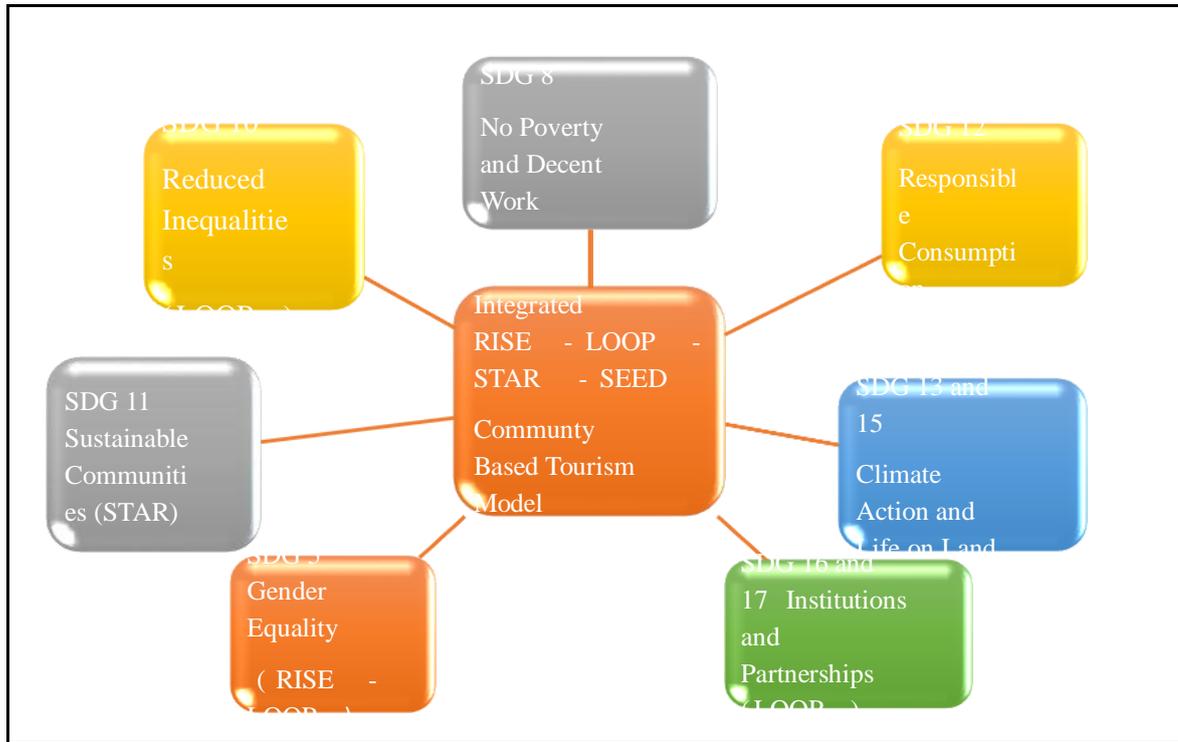
- **RISE (Resilience, Inclusion, Sustainability, Empowerment)** is supported by the dominant factor community-based tourism benefits (Livelihoods and Empowerment), which accounted for 32.71% of the total variance (F1), indicating the centrality of economic participation and empowerment in community resilience.
- **STAR (Social Cohesion, Trust, Collective Identity)** directly reflects the strong positive correlation between CBT benefits and social cohesion ($r = 0.684, p < 0.01$), demonstrating that economic participation through CBT is closely linked with trust, cooperation, and collective identity.
- **LOOP (Participatory Governance and Feedback Mechanisms)** is informed by the factor Community Participation (Governance and Conservation) and reinforced by thematic findings showing community involvement in planning, conservation activities, and institutional coordination.
- **SEED (Sustainable Enterprise and Destination Regeneration)** is grounded in observed livelihood diversification through home stays, handicrafts, guiding services, and cultural enterprises, as evidenced in both survey data and thematic analysis.

While the model is empirically informed, it is not statistically tested as a structural model. Instead, it serves as a conceptual synthesis grounded in validated empirical relationships, offering a heuristic framework for understanding how CBT processes interact over time in indigenous and conservation-sensitive contexts.

Alignment With Sustainable Development Goals

The Integrated RISE–LOOP–STAR–SEED Model demonstrates strong alignment with the United Nations Sustainable Development Goals (SDGs) by embedding social cohesion, participatory governance, and community empowerment at the core of tourism development. Rather than treating sustainability outcomes in isolation, the model operationalizes multiple SDGs through an integrated, community-led tourism framework.

Fig 2. Integrated RISE – LOOP – STAR – SEED Community Based Tourism Model with Sustainable Development Goals



The SEED component directly supports SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic growth) by promoting community-owned micro-enterprises such as homestays, handicrafts, guiding services, and cultural performances. These activities enable livelihood diversification, enhance local income retention, and reduce dependency on extractive or low-return occupations. Complementarily, the RISE and LOOP components emphasize capacity building, skill development, and institutional feedback mechanisms that sustain employment opportunities and equitable benefit-sharing.

Gender inclusivity, aligned with **SDG 5 (Gender Equality)**, is embedded through women’s participation in tourism enterprises, self-help groups, and local governance structures. By facilitating access to income, leadership roles, and decision-making platforms, the model contributes to women’s economic independence and social empowerment within indigenous communities.

The STAR component advances **SDG 11 (Sustainable Cities and Communities)** by positioning cultural continuity, collective identity, and community cohesion as core tourism assets. Cultural practices, indigenous knowledge systems, and social networks are strengthened through locally controlled tourism, while the LOOP mechanism ensures adaptive planning that mitigates risks of cultural commodification and over-tourism.

Responsible production and consumption, central to **SDG 12**, are promoted through localized supply chains, eco-friendly services, and awareness-building among tourists regarding responsible behaviour. These practices reduce environmental footprints while enhancing local economic resilience.

Climate responsiveness, linked to **SDG 13 (Climate Action)**, is facilitated through community-based environmental stewardship and adaptive governance. Continuous feedback loops enable communities to adjust tourism activities in response to ecological stress, while conservation-linked livelihoods encourage long-term biodiversity protection.

Finally, the model operationalizes **SDG 17 (Partnerships for the Goals)** by emphasizing collaboration among local communities, government agencies, NGOs, academic institutions, and the private sector. These

multistakeholder partnerships support policy coherence, technical assistance, and resource mobilization, ensuring the long-term sustainability and scalability of community-based tourism initiatives.

Through this integrated SDG alignment, the RISE–LOOP–STAR–SEED Model offers a policy-relevant and transferable framework for advancing sustainable tourism in rural, indigenous, and wildlife-based destinations.

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

While the study provides robust empirical and conceptual insights, several limitations must be acknowledged. First, the cross-sectional research design restricts causal interpretation. Although strong associations are identified between CBT participation and social cohesion, it remains unclear whether CBT fosters cohesion or whether socially cohesive communities are more capable of adopting and sustaining CBT initiatives.

Second, the use of convenience sampling for tourists limits the generalizability of visitor-related findings beyond the study area.

Third, the qualitative component, based on thematic analysis of open-ended survey responses, remains exploratory and does not capture the depth achievable through interviews or focus group discussions.

Future research could address these limitations by adopting longitudinal designs, comparative multi-site studies, or Structural Equation Modeling (SEM) to statistically test the pathways proposed within the RISE–LOOP–STAR–SEED model. Such approaches would allow for validation of causal mechanisms linking CBT benefits, governance, social cohesion, and sustainable enterprise development. From a policy perspective, the findings underscore the need for tourism planning frameworks that prioritise participatory governance, local ownership, and cultural integrity. Strengthening institutional support mechanisms, capacity-building initiatives, and inclusive decision-making structures can enhance the long-term sustainability of community-based tourism initiatives in protected landscapes such as Chakrasila Wildlife Sanctuary.

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