

Sustainable Tourism in the Eastern Himalayas: A Case Study of Dirang Region in Arunachal Pradesh


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Abstract:

Sustainability in Tourism has been an icing on the cake in recent Tourism studies as it ensures balanced development of an ecologically fragile and culturally sensitive region. The Dirang region of the West Kameng District of Arunachal Pradesh located in the Eastern Himalayas comes with a rich biodiversity, the very unique and indigenous Monpa culture and emerging tourism potential (Shimrah.T. et al 2012) Due to its scenic landscapes, hot water springs, monasteries and agricultural activities like the cultivation of kiwi and apples. But at the same time such kind of a rapid growth of tourism also indicates damage of the environment and the disruption of the socio-cultural balance. Therefore, necessary steps to be taken to maintain such a fragile and balanced ecosystem.

This paper examines the various dimensions of sustainable tourism development in Dirang by focusing on three key aspects i.e. the Policy framework, Challenges and Opportunities. The research adopts a mixed method approach combining the qualitative inputs from stakeholder interviews and the quantitative data collected from the tourist. Secondary data collected from the Government policy documents, tourism reports and existing academic literature have also been reviewed for a detailed understanding of the region's tourism importance.

After the study conducted, it has been observed that Dirang comes with significant potential for eco-tourism. Also it is found that the region has tremendous potential for agro-tourism and community-based tourism specially the homestay-based tourism. However, several constraints like inadequate infrastructure, limited accessibility, lack of trained human resources, not very structured policy and waste management and ecosystem degradation are hindering the sustainable development of this beautiful region. The study proposes a framework to develop infrastructure managing the environment increasing the community involvement to focus Dirang as a model eco-tourism destination in the Eastern Himalayan region.

Key words: Sustainable tourism, Eco-tourism, Community- based Tourism, Home stay tourism

Introduction:

Tourism has been one of the fastest growing sectors in terms of the global economy which has significant contribution to the employment generation, development of a region and cultural exchange. However, this speedy growth in an ecologically sensitive region like Dirang may call for serious concerns like environmental degradation, resource depletion and socio cultural disturbance (Choudhary, B. K. (2016)). To face these concerns, the concept of sustainable tourism provides guidelines that help maintaining balanced economic development with the conservation of the environment and the socio cultural integrity. Sustainable Tourism involves the process of responsible use of natural

resources, preservation of biodiversity and involvement of the local community in the tourism planning and management (Ahmed, E. M. (2024)). It somehow clears the road map for the future safeguarding the environment for overall tourism development. In a region like the Eastern Himalaya where the ecology is very fragile, the importance of sustainable tourism becomes more important because of the unstable ecosystem and the reliable factor of the local habitants on the natural resources.

Arunachal Pradesh witnesses the first rays of the sunlight in India's Easternmost corner. It's sublime natural beauty, diverse tribal cultures, and abundant wildlife, attracts tourists from across the world, seeking unique and authentic experiences. Arunachal Pradesh is recognized for its exceptional biodiversity, pristine landscapes and rich cultural heritage. One of the least explored regions of India, Arunachal Pradesh offers immense potential for nature-based and cultural tourism. The Dirang region of the state has recently emerged as a famous tourist destination with lot of potentiality. Besides, it is also a transit point on the way to Tawang which makes it strategically more famous along with its diverse ranges of attractions. The moderate climate, compared to the other high- altitude areas makes it more tourists friendly round the year besides its picturesque valleys, snow-fed rivers, hot water springs, apple orchards. The tradition and the lifestyle of the Monpa tribe make this region more vibrant because of its rich socio-cultural diversity (Solanki, G. S. et al 2004). The tribe's deep rooted connection with the nature, the agricultural practices and preservation of cultural heritage brings an alignment with the words sustainable tourism. The community- based tourism can well be experienced through the traditional architecture, local indigenous festivals, Buddhist monasteries and the overall representation of the Monpa tribe.

So far as the Policy implementation is concerned, The Arunachal Government has taken lot of initiatives for the promotion of eco-tourism and participation of the community (Mandal, R. K. et al 2021). But these policies get due respect only when they are implemented well in the grass root level and how are they being communicated within the stakeholders. Dirang has got immense potential to develop as a model for eco-tourism in the Eastern Himalayan region, however to achieve this goal the various opportunities and limitations of this region needs to be understood. Therefore through this study attention has been given to understand the various key challenges for applying the policies and to explore the opportunities for sustainable tourism development in Dirang.

Research Objectives:

The study tries to develop a comprehensive study of Sustainable Tourism development in this region through the natural resources available, policies to be implicated, various challenges and the future prospects. The following objectives are designed by considering the environmental, economic and the socio-cultural factors.

1. To find out the Tourism potential of Dirang:

It focuses on the analysis of the following points:

- i) Natural attractions such as valley, rivers, hot springs and bio-diversity.
- ii) Cultural significance like the Monpa tribes, Monasteries, festivals and indigenous knowledge systems.
- iii) Emerging tourism forms such as eco-tourism, wine tourism and wellness tourism.

2. To evaluate the Policy Framework related to sustainable tourism:

This objective identifies the gaps between the policy formulation and the practical implementation through the following points:

- i) Study of the tourism policy documents and the eco-tourism initiatives.
- ii) Evaluation of the policy implementation at the grassroots level.

iii) Study of the institutional support, governance mechanism and stakeholder cooperation.

3. To study various challenges while experiencing sustainable tourism development:

The various constrains hindering the growth of sustainable tourism development can be summarized as:

i) Environmental challenges: Waste management, ecological degradation, over-tourism risks.

ii) Economic challenges: Limited investment, seasonal tourism and income instability.

iii) Socio-cultural challenges: Cultural commodification, erosion of traditions.

iv) Infrastructure challenges: Poor connectivity, lack of accommodation and amenities.

This objective helps identifying the various barriers of sustainability.

4. To study opportunities for Sustainable tourism development:

This objective includes the following which helps to form a road map for sustainable tourism.

i) The possibilities of expansion of eco tourism and community based tourism.

ii) Chances of increasing agro tourism and also the wine tourism.

iii) Combining renewable energy and sustainable tourism.

iv) The urge for experiential and responsible tourism.

Research Methodology:

The current investigation is exploratory in nature. The study examined the importance of Dirang region of Arunachal Pradesh for bringing sustainable development keeping the environment intact. The study is both on primary data and secondary data. A line of telephonic interviews were conducted with the stakeholders of the tourism industry in the Dirang region to gather some insightful information. Secondary datas were collected through evaluation of the literature which included journals, books, reports produced by various national and state level bodies and some valuable websites.

While conducting the study in Dirang region of West Kameng district of Arunachal Pradesh, a descriptive, analytical and exploratory research design has been followed. Here the descriptive design documents tourism resources and stakeholder perceptions. Whereas the Analytical research design evaluates relationships between policy, infrastructure and sustainability. On the other hand, the exploratory design investigates emerging trends like eco-tourism and agro-tourism in Dirang.

This picturesque region is selected due to the following points:

a) Its emerging tourism importance.

b) Sensitivity of the Eastern Himalayan.

c) The reach cultural and natural resource base.

Literature Review:

Sustainable tourism has emerged as a major area of research in recent decades due to the increasing environmental and socio-cultural impacts of tourism activities across the world. The concept gained international recognition after the

publication of the Brundtland Report (1987), which emphasized development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Hajian, M. et al 2021). In tourism studies, sustainable tourism mainly focuses on balancing environmental conservation, socio-cultural preservation and economic development.

According to the United Nations World Tourism Organization (UNWTO), sustainable tourism refers to tourism that takes full account of its current and future economic, social and environmental impacts while addressing the needs of visitors, industry, environment and host communities. Scholars like Butler (1999) and Swarbrooke (2002) highlighted that sustainable tourism is essential particularly in ecologically fragile regions where uncontrolled tourism can lead to severe environmental degradation and cultural erosion.

Several studies conducted in mountain regions and biodiversity-rich areas have emphasized the importance of eco-tourism and community participation in tourism planning. Nepal (2000) argued that Himalayan tourism regions are highly vulnerable to environmental degradation because of increasing tourist pressure and weak infrastructure. Similarly, sustainable tourism in the Himalayan region requires strong environmental management, waste control mechanisms and local community involvement (Thakur, A. et al. 2021).

Research on North-East India has also focused on the growing importance of sustainable tourism. Das and Chatterjee (2015) examined eco-tourism development in North-East India and pointed out that the region possesses exceptional natural and cultural resources but lacks proper infrastructure and policy implementation. Their study emphasized the importance of community-based tourism for preserving indigenous traditions while ensuring economic benefits to local communities.

Arunachal Pradesh, being one of the biodiversity hotspots of India, has attracted the attention of several tourism researchers. Singh (2018) stated that the tourism potential of Arunachal Pradesh lies in its tribal culture, monasteries, adventure tourism and pristine natural beauty (Mandal, R. K. 2023). However, poor accessibility, lack of trained manpower and inadequate tourism infrastructure continue to restrict tourism growth in the state. The tribal communities of Arunachal Pradesh maintain a close relationship with nature, which aligns strongly with the principles of sustainable tourism (S. Raha. et al. 2022).

Studies specifically related to the Monpa tribal community indicate that their traditional lifestyle and agricultural practices contribute significantly toward environmental sustainability. According to Norbu (2017), the Monpa community practices traditional ecological knowledge in farming, forest conservation and water management, which can become a valuable resource for sustainable tourism planning. The traditional architecture, Buddhist monasteries and indigenous festivals of the Monpa tribe also create opportunities for cultural and experiential tourism (Gohain, S. 2024).

A number of researchers have discussed the role of community-based tourism in remote Himalayan destinations. Murphy (1985) emphasized that local community participation is the backbone of sustainable tourism because it increases local ownership and reduces cultural conflicts. In the context of North-East India, it is observed that homestay tourism has become an important model for rural tourism development by generating employment opportunities and preserving local culture (Bhuyan, N. et al 2021). Homestays also provide authentic cultural experiences to tourists and encourage direct interaction between visitors and host communities.

Agro-tourism and wine tourism are emerging research areas in tourism studies. Studies showed that wine tourism contributes significantly toward regional economic development while promoting local agricultural products and cultural identity (Hall et al. 2000). In the context of Arunachal Pradesh, researchers have recently identified Dirang as a potential destination for agro-tourism due to its kiwi farms, apple orchards and organic agricultural practices (Wangchu, L. et al. 2024). The moderate climatic conditions and agricultural diversity of the region provide opportunities for sustainable rural tourism development.

Several studies have also focused on the environmental challenges associated with tourism development in mountain ecosystems. Buckley (2012) noted that increasing tourist activities often lead to waste generation, biodiversity loss and pressure on natural resources. Similar concerns have been raised in the Eastern Himalayan region where rapid tourism growth without proper planning threatens ecological balance. Waste management, water scarcity and unplanned construction activities are considered major barriers to sustainable tourism in such fragile ecosystems.

Policy-related studies indicate that effective governance and institutional support are essential for sustainable tourism development. The Tourism Policy of Arunachal Pradesh emphasizes eco-tourism, community participation and conservation-oriented tourism development. However, researchers like Baruah (2021) argued that the gap between policy formulation and implementation remains a major challenge. Lack of coordination among stakeholders, inadequate monitoring and limited awareness among local communities often reduce the effectiveness of tourism policies at the grassroots level.

Recent literature also highlights the increasing demand for responsible and experiential tourism after the COVID-19 pandemic. Tourists are now more interested in nature-based tourism, wellness tourism and authentic cultural experiences (Majeed, S. et al 2023). In this regard, destinations like Dirang possess strong potential because of their peaceful environment, hot water springs, monasteries and traditional lifestyle. Scholars suggest that sustainable tourism models focusing on low-impact tourism, renewable energy use and local participation can help such regions achieve long-term tourism growth.

From the review of existing literature, it is evident that although several studies have been conducted on eco-tourism, community-based tourism and sustainable tourism in the Himalayan region, limited research has specifically focused on Dirang. Most studies discuss Arunachal Pradesh in a broader context without detailed examination of Dirang's tourism policies, opportunities and sustainability challenges. Therefore, the present study attempts to fill this research gap by critically examining the policy framework, challenges and opportunities for sustainable tourism development in the Dirang region of Arunachal Pradesh.

Challenges faced by the local community:

The Dirang region while promoting sustainable tourism faces lot of hurdles, however the tourism is still picking up. Some of the challenges are highlighted below.

- **Lack of adequate infrastructure:** Poor road connectivity, limited transportation facilities, irregular electricity supply, weak digital connectivity and insufficient healthcare services hinder tourism growth and reduce the quality of visitor experience. Sometimes the adverse weather conditions causing landslide and road blockage often isolate the region.
- **Environmental degradation caused by unplanned tourism activities:** Since Dirang lies in an ecologically sensitive zone, the increasing footfalls leads to improper waste disposal, plastic pollution, imbalance of water resources disturbs the fragile Himalayan ecosystem.
- **Limited training on sustainable tourism practices:** The local residents lack professional skills in hospitality management, waste management, eco-tourism operations, and digital marketing.
- **Cultural commodification of the Monpa Community:** The commercialization of cultural festivals and traditions sometimes reduces their authenticity and spiritual significance of the Monpa community.
- **Insufficient Government support:** Improper policy implementation and lack of coordinated tourism planning create barriers to long-term sustainability. Financial constraints hinder the local community from developing eco-friendly homestays, organic farms and community based tourism activities.

Therefore, sustainable tourism in Dirang requires a balanced approach that emphasizes community participation, environmental protection, infrastructure development, cultural preservation, and responsible tourism policies.

Empowering local communities through education, skill development, and inclusive tourism planning can significantly contribute to the sustainable growth of tourism in the region.

Conclusion:

The present study highlights that the Dirang region of Arunachal Pradesh possesses immense potential for sustainable tourism development due to its exceptional natural beauty, rich biodiversity, indigenous Monpa culture and emerging forms of tourism such as eco-tourism, agro-tourism, wellness tourism and homestay-based tourism. Located in the ecologically fragile Eastern Himalayan region, Dirang represents a unique destination where environmental conservation and tourism development must progress together in a balanced and responsible manner.

The findings of the study reveal that the region's scenic valleys, monasteries, hot water springs, apple orchards, kiwi cultivation and traditional cultural practices create strong opportunities for experiential and community-based tourism. The traditional ecological knowledge and environmentally responsible lifestyle of the Monpa community further strengthen the possibility of developing Dirang as a model sustainable tourism destination. Tourism in the region not only has the capacity to generate employment and improve the local economy but also to preserve indigenous culture and promote regional identity.

However, the study also identifies several major challenges that hinder the sustainable growth of tourism in Dirang. Poor infrastructure, inadequate transportation and communication facilities, lack of trained human resources, unplanned tourism activities, weak waste management systems and increasing pressure on the fragile ecosystem pose serious concerns for the future sustainability of the destination. In addition, gaps between tourism policy formulation and implementation at the grassroots level reduce the effectiveness of sustainable tourism initiatives. If these issues are not addressed properly, rapid tourism growth may lead to environmental degradation, loss of biodiversity and socio-cultural imbalance.

The research therefore emphasizes the urgent need for integrated tourism planning involving government agencies, local communities, private stakeholders and environmental organizations. Sustainable tourism policies should focus on eco-friendly infrastructure development, proper waste management, conservation of natural resources, and promotion of renewable energy and strengthening of community participation in tourism activities. Capacity building programs, skill development training and awareness initiatives among local residents are equally important for ensuring long-term tourism sustainability.

Furthermore, the promotion of homestay tourism, agro-tourism and responsible travel practices can help distribute tourism benefits directly to local communities while minimizing environmental impacts. Dirang also has the potential to become an important destination for low-impact tourism and wellness tourism in the Eastern Himalayan region if tourism development is carried out in a planned and regulated manner.

In conclusion, sustainable tourism development in Dirang requires a balanced approach that integrates environmental protection, socio-cultural preservation and economic growth. With proper planning, effective policy implementation and active community involvement, Dirang can emerge as a successful model of sustainable tourism not only for Arunachal Pradesh but also for the entire Eastern Himalayan region. The study ultimately suggests that the future of tourism in Dirang depends on maintaining harmony between tourism expansion and ecological as well as cultural sustainability.

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