



Exploring the Role of Ecotourism in Advancing Sustainable Tourism Development in Murree, Pakistan

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Abstract

This qualitative study examines the potential of ecotourism to advance sustainable tourism development in Pakistan, with a particular focus on the environmentally sensitive and culturally significant region of Murree. By conducting a thematic literature review across economic, environmental, and socio-cultural dimensions, the research synthesizes insights into how community-based ecotourism initiatives can contribute to conservation efforts, livelihood diversification, and the preservation of local heritage. The findings reveal that well-managed ecotourism in Murree and comparable areas such as Gilgit-Baltistan and the Swat Valley can create alternative income streams, strengthen conservation practices, and foster cultural resilience. The study emphasizes the importance of active community participation, environmental education, and responsible visitor management to ensure long-term sustainability. Overall, the research offers a nuanced understanding of ecotourism's practical role in balancing development goals with the protection of fragile mountain ecosystems and cultural assets in Murree and beyond.

Keywords: Ecotourism, Murree, sustainable tourism, community-based tourism, conservation, Pakistan.

Introduction

In recent decades, sustainable tourism has received growing attention worldwide as a means of striking a balance between economic development, environmental protection, and the safeguarding of sociocultural heritage (UNWTO, 2018). Despite this widespread policy interest, however, many sustainable tourism initiatives in developing countries, including Pakistan, have struggled to achieve their intended outcomes in practice. This is often due to gaps in local capacity, limited awareness, and insufficient incentives for communities to adopt conservation-oriented behaviors (Buckley, 2012; Das & Chatterjee, 2015).

Pakistan's mountainous regions, such as Murree, Gilgit-Baltistan, Swat Valley, and Chitral, have seen a surge in mass tourism that has brought

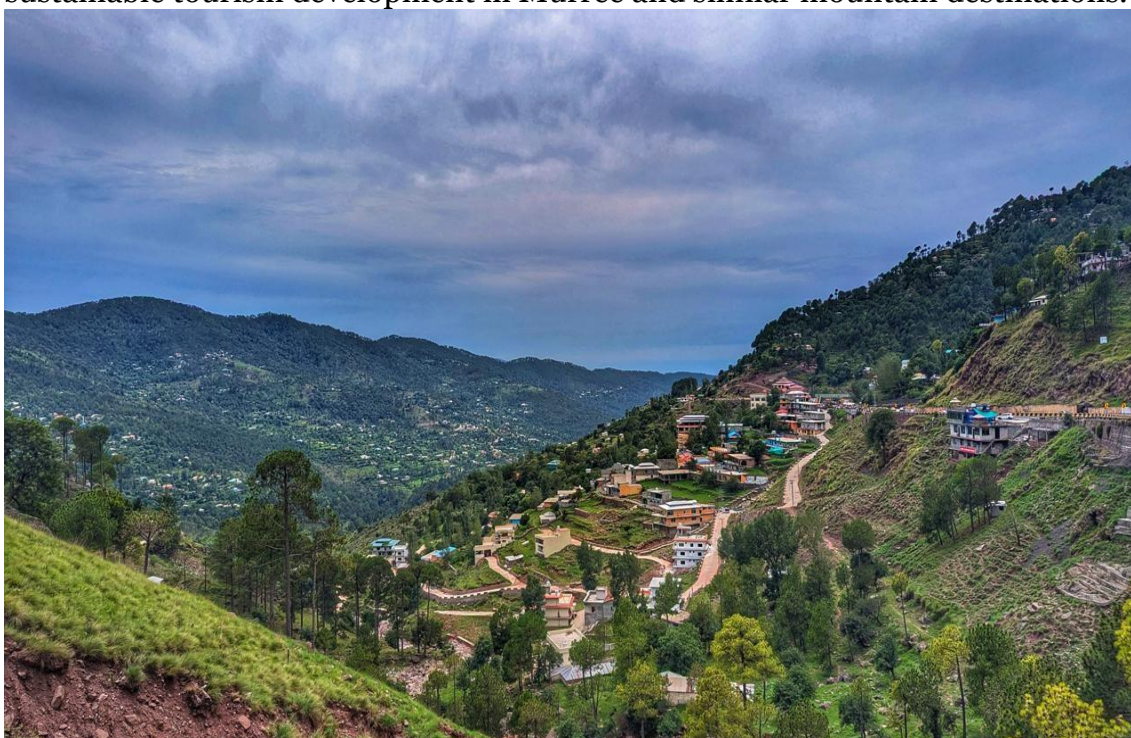


undeniable economic opportunities. Yet, this rapid expansion has also heightened environmental pressures, led to overtourism, and threatened the cultural fabric of local communities. Murree, as one of the country's most popular hill stations, illustrates both the promise and the challenges of tourism development in fragile mountain ecosystems.

In this context, ecotourism has emerged as a practical approach for embedding sustainability principles into the tourism sector. Ecotourism aims to balance development with the careful management of natural resources, placing strong emphasis on community involvement, environmental education, and responsible visitor conduct. According to the International Ecotourism Society (TIES, 2015), genuine ecotourism is defined as responsible travel to natural areas that conserves the environment, sustains the well-being of local people, and involves interpretation and learning.

Academic research suggests that when properly designed, ecotourism can empower local communities to protect delicate habitats, develop alternative livelihoods, and share their unique cultural landscapes with visitors in meaningful ways (Krüger, 2005; Harilal & Tichaawa, 2018). For regions like Murree, this represents an important opportunity to reduce dependence on unsustainable practices such as unplanned construction, deforestation, and unmanaged urban sprawl.

While literature on ecotourism has expanded globally, there remains a notable gap in understanding how this approach can be effectively integrated within Pakistan's distinct regional contexts particularly in Murree, where governance structures, community engagement, and fragile mountain environments present both opportunities and constraints (Honey, 2008; Fennell, 2021). This study therefore addresses this gap by thematically reviewing and synthesizing existing knowledge to explore how ecotourism can support sustainable tourism development in Murree and similar mountain destinations.



Eco-tourism site in Murree. Author's photograph, July 2025



Background

Globally, the urgent need for sustainable tourism has become increasingly evident as the damaging consequences of unregulated mass tourism on ecosystems, local communities, and regional economies continue to emerge (Shi, Li, & Li, 2019). Without careful planning and management, tourism can contribute to habitat destruction, water pollution, excessive waste generation, and the erosion of cultural values (Sharples, 2009; Gössling & Hall, 2006). Mountainous areas, which are often home to delicate ecosystems and culturally distinctive communities, are particularly vulnerable to these impacts (Reed & Massie, 2014; Morgera et al., 2017).

In Pakistan, the hill station of Murree is one of the country's most visited destinations, attracting thousands of tourists each year due to its pleasant climate, forested slopes, and convenient access from major urban centers. However, this popularity has also come at a cost. Unplanned construction of hotels and holiday homes, deforestation to clear land for development, unmanaged waste disposal, and overuse of limited water resources have placed severe strain on Murree's fragile natural environment. Similar trends can be observed in other mountainous regions such as Gilgit-Baltistan, Swat Valley, and Fairy Meadows.

Given these challenges, ecotourism has gained traction as a promising alternative to mass tourism in Pakistan's sensitive mountain regions. By emphasizing low-impact travel, conservation awareness, and tangible benefits for host communities, ecotourism can help mitigate the negative effects of mainstream tourism. In Murree, for instance, well-planned ecotourism could offer a practical solution to issues like deforestation and unmanaged waste, while also diversifying income streams for local households.

Scholars argue that ecotourism can support sustainable livelihoods by creating new economic opportunities, encouraging the protection of biodiversity, and celebrating cultural heritage (Krüger, 2005; Hunt et al., 2015). Local initiatives such as community-managed guesthouses, nature trails, and conservation-based visitor activities could be especially valuable in Murree's forests and surrounding rural villages, where local people are often the custodians of ecological and cultural assets.

The International Ecotourism Society (TIES, 2015) stresses that genuine ecotourism requires commitment to local empowerment and environmental integrity, both of which are vital for Murree's long-term viability as a mountain destination. However, successful ecotourism depends on addressing persistent governance and capacity challenges, ensuring that residents have the skills, incentives, and institutional support to manage tourism sustainably.

By examining existing evidence and drawing lessons from both local and international examples, this study situates Murree as a core case to explore how ecotourism can advance sustainable tourism development in Pakistan's mountain regions. It aims to demonstrate that carefully designed ecotourism initiatives can play a pivotal role in balancing economic growth with environmental stewardship and cultural preservation.



Ecotourism in Pakistan's fragile mountain ecosystems

Theoretical Framework

Conceptual Framework: The Role of Ecotourism in Advancing Sustainable Tourism Development in Murree

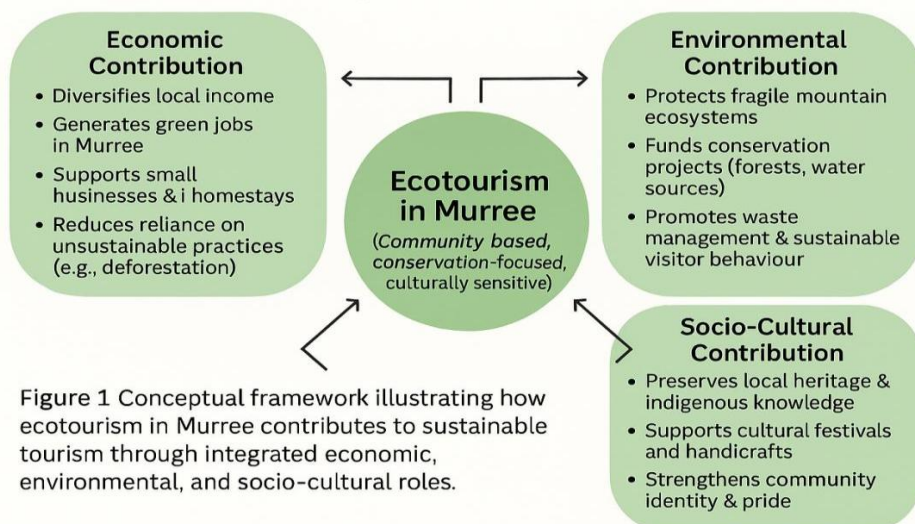


Figure 1 Conceptual framework illustrating how ecotourism in Murree contributes to sustainable tourism through integrated economic, environmental, and socio-cultural roles.



This study adopts a conceptual framework that illustrates the multidimensional role of community-based ecotourism in advancing sustainable tourism development in Murree, one of Pakistan's most popular and environmentally sensitive hill stations. Rooted in sustainability theory, the framework emphasizes that long-term sustainability can only be achieved when ecotourism simultaneously contributes to three interrelated dimensions: economic viability, environmental conservation, and socio-cultural preservation.

The economic dimension highlights how ecotourism can generate stable income for local communities through diversified livelihood opportunities such as homestays, locally guided nature walks, and the sale of traditional handicrafts. In Murree, this has the potential to reduce communities' reliance on unsustainable activities, including unregulated construction and deforestation, which have historically threatened the region's fragile ecosystems.

The environmental dimension underscores the role of ecotourism in conserving Murree's forests, mountain landscapes, and water resources. By reinvesting tourism revenues into conservation projects, waste management systems, and environmental education for both visitors and residents, ecotourism can serve as an effective tool for protecting biodiversity and maintaining ecological integrity.

The socio-cultural dimension focuses on preserving Murree's unique cultural identity, including its indigenous knowledge, folklore, and traditional craftsmanship. Active community participation in planning and managing ecotourism initiatives can help safeguard these cultural assets while fostering a sense of local ownership and pride. Moreover, cultural exchange between visitors and host communities can strengthen mutual understanding and respect.

Collectively, these three interconnected components demonstrate that sustainability in tourism must be approached holistically, balancing economic benefits with conservation imperatives and cultural resilience. This framework provides the conceptual basis for examining how community-based ecotourism in Murree can operationalize sustainability principles in practice. It also serves as a guide for identifying the enabling conditions, governance structures, and policy measures required to scale up ecotourism as a viable strategy for sustainable tourism development in Pakistan's mountain regions.

Literature Review

This literature review brings together qualitative insights on how ecotourism contributes to sustainable tourism, with particular attention to its relevance for Murree and similar mountain destinations in Pakistan. The review is organized around three interlinked themes: the economic, environmental, and socio-cultural roles of ecotourism.

Ecotourism can create new and sustainable livelihood opportunities for local communities. Scholars such as Stronza et al. (2019) and Khan et al. (2022) highlight that in rural areas, community-based ecotourism initiatives generate income through small-scale guesthouses, guided nature treks, wildlife observation, and the sale of local handicrafts. In Murree, these models can help shift local reliance away from unsustainable practices, such as illegal timber cutting or overdevelopment, which have historically damaged the region's scenic hillsides and forest cover.

Qualitative studies also stress that diversified income sources strengthen community resilience by reducing economic vulnerability to seasonal



fluctuations. However, literature points to possible challenges, including unequal benefit distribution or elite capture of profits when local governance structures are weak (Zambrano et al., 2010). Addressing these concerns through transparent community engagement is vital for ensuring that economic gains from ecotourism genuinely benefit residents in Murree.

A key aim of ecotourism is to promote the protection of natural resources and biodiversity. Studies by Buckley (2012) and Ali and Badshah (2019) demonstrate that revenues generated through park fees and community-led visitor services can be reinvested into conservation activities. In Murree's context, this could include better waste management systems, reforestation efforts, and education campaigns to raise awareness about preserving fragile mountain ecosystems.

Evidence shows that ecotourism can help communities develop a sense of stewardship towards their environment, replacing unsustainable land uses with practices that prioritize long-term conservation (Hunt et al., 2015; Shi et al., 2019). However, researchers also caution that without proper monitoring and visitor management, ecotourism risks causing unintended environmental damage for example, trail erosion, habitat disturbance, or increased waste if carrying capacities are not respected (Stone & Nyaupane, 2018). In Murree, where high tourist volumes are already a concern, robust management plans and community-based regulations will be crucial.

Ecotourism plays a vital part in preserving and promoting local cultural heritage. In Murree, this could involve showcasing traditional storytelling, regional crafts, and local festivals as authentic parts of the visitor experience. Scholars such as Stronza et al. (2019) and Khan et al. (2022) argue that community ownership of ecotourism activities strengthens cultural pride and helps keep indigenous knowledge alive for younger generations.

Community participation is essential to avoid cultural commodification or over-commercialization of traditions. Where communities are meaningfully involved in decision-making, they are more likely to safeguard their cultural identity while delivering authentic experiences to visitors (Bhuiyan et al., 2012). Furthermore, ecotourism can help build environmental awareness among both locals and tourists, creating a shared sense of responsibility for cultural and natural heritage (Fennell, 2021).

Methodology

Research Design

This research adopts a qualitative design to explore how ecotourism can contribute to sustainable tourism development, with Murree as a central case. A qualitative approach is particularly appropriate because it allows a deeper understanding of the social, cultural, and environmental relationships that numerical data alone cannot fully reveal (Creswell, 2013).

Research Approach

The study relies on a thematic literature review, which systematically identifies, organizes, and synthesizes recurring ideas across existing academic work. This approach is especially suited for building a broad conceptual understanding of ecotourism's economic, environmental, and socio-cultural roles, and for drawing lessons that apply directly to Murree's fragile mountain setting.

By using thematic analysis, the review not only uncovers what has worked



elsewhere but also highlights context-specific opportunities and limitations for Murree, a destination that faces unique challenges related to overtourism, forest depletion, and local capacity for conservation.

Data Sources and Collection

The data were gathered from peer-reviewed journals, books, and reputable reports accessed through academic databases such as Scopus, Web of Science, Google Scholar, and ScienceDirect. Searches focused on publications from the last two decades to ensure contemporary relevance.

Key search terms included:

- “Ecotourism and Murree”
- “Community-based tourism Pakistan”
- “Sustainable tourism development”
- “Environmental conservation mountain regions”
- “Cultural heritage preservation tourism”

Findings

The thematic synthesis of existing literature reveals clear evidence that ecotourism, when properly planned and community-driven, can be a practical pathway to sustainable tourism development in Pakistan particularly for Murree, which faces increasing environmental and socio-cultural pressures due to mass tourism.

The review indicates that ecotourism initiatives can diversify local income streams, offering residents in Murree alternative livelihoods that reduce dependence on unsustainable activities like excessive timber extraction or informal urbanization. Examples from other mountain regions show that homestays, guided nature walks, and the sale of local crafts create meaningful job opportunities, especially for women and youth.

In Murree, where a significant portion of the local population depends on seasonal tourism, community-managed ecotourism ventures could provide a more stable income throughout the year. However, the findings caution that economic benefits must be equitably distributed, as unchecked tourism development elsewhere has often resulted in profits being captured by outside investors rather than local families.

Evidence consistently points to ecotourism’s role in conserving fragile ecosystems by channeling visitor spending into environmental protection. In the context of Murree, known for its forests, biodiversity, and scenic landscapes, well-managed ecotourism can help reduce illegal logging and littering by generating funds for forest conservation and waste management.

Moreover, community participation is vital. Local people, when engaged as stewards of their natural resources, develop a stronger sense of responsibility. The literature highlights that effective ecotourism projects elsewhere have coupled visitor education with local capacity building, ensuring that both tourists and residents understand the value of conservation.

The review also reveals that ecotourism supports the preservation of cultural heritage by providing platforms for communities to showcase traditional crafts, folklore, and local cuisine. For Murree, this is particularly relevant as the town’s cultural identity risks dilution due to overtourism and modernization.

Community-based tourism can revive interest in local heritage by connecting visitors to authentic experiences and encouraging intergenerational



knowledge sharing. However, the findings warn that if not carefully managed, cultural commodification can occur, with traditions being staged purely for tourists rather than being valued as living heritage.

Conclusion

This study has explored how ecotourism can act as a practical strategy for advancing sustainable tourism development in Pakistan, with a specific focus on Murree. The thematic synthesis confirms that, if designed and managed responsibly, ecotourism holds the potential to generate stable livelihoods, protect fragile mountain ecosystems, and safeguard the region's rich cultural identity.

Economically, community-based ecotourism offers Murree's residents an opportunity to diversify their income beyond seasonal or informal tourism activities that often degrade the environment. By supporting small-scale homestays, local guides, and authentic craft production, ecotourism can provide jobs that align with conservation objectives.

Environmentally, Murree's forests, wildlife, and scenic trails stand to benefit from tourism revenue invested in waste management, forest restoration, and visitor education. When local communities are included as genuine stakeholders, they are more likely to adopt sustainable practices that maintain the natural beauty which attracts tourists in the first place.

Socio-culturally, Murree's traditions, crafts, and local stories can be preserved and revitalized through carefully planned cultural tourism experiences. Ecotourism encourages pride in local heritage while helping communities resist the negative impacts of cultural dilution or commercialization.

However, the findings also reinforce that successful ecotourism is not guaranteed. It requires robust policies, fair benefit-sharing, visitor management, and continuous monitoring to avoid repeating the mistakes of unregulated mass tourism. Local communities in Murree must be at the forefront not only as service providers but as decision-makers shaping how tourism unfolds.

In sum, Murree's unique landscapes and heritage place it in an excellent position to benefit from ecotourism as a balanced approach to sustainable tourism development. With a strong commitment to community participation, environmental stewardship, and cultural respect, Murree could serve as a national example of how tourism can genuinely contribute to a greener, fairer, and more resilient future.

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