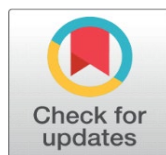


A SPECIAL OPPORTUNITIES AND CHALLENGES OF ADVENTURE TOURISM IN MUNSIYARI AND BERINAG BLOCK LOCATED IN PITHORAGARH DISTRICT OF UTTARAKHAND STATE

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ABSTRACT

Thus, adventure tourism is a leading sector which has a potential to impact the economy and sustainable development of a state like Uttarakhand. The new sites include Munsiyari and Berinag, which are known for their diverse and unique natural landscape, rich biodiversity, cultural heritage and agriculture and are seen as a potential hub for adventure tourism - all features of adventure tourism. The focus of this study is the opportunities and challenges of adventure tourism in these regions. The study utilizes both primary data collection via surveys and interviews, and secondary data analysis using a mixed-method approach. Identified potential opportunities include trekking, mountaineering, skiing and eco-tourism that can provide local jobs and diversify the economy. But the study also points to key problems, including insufficient infrastructure, environmental hazards, security issues, and the need for intervention at the political level to guarantee sustainable tourism growth. The study demonstrates that by simultaneously providing government support, community participation, and private sector investment, the positive impacts and potential risks of adventure tourism can be optimized or minimized. These Himalayan regions will benefit from long-term economic and ecological resilience through strategic planning and sustainable tourism policies.

Keywords: Adventure Tourism, Munsiyari, Berinag, Sustainable Tourism, Economic Development, Infrastructure, Environmental Challenges

1. INTRODUCTION

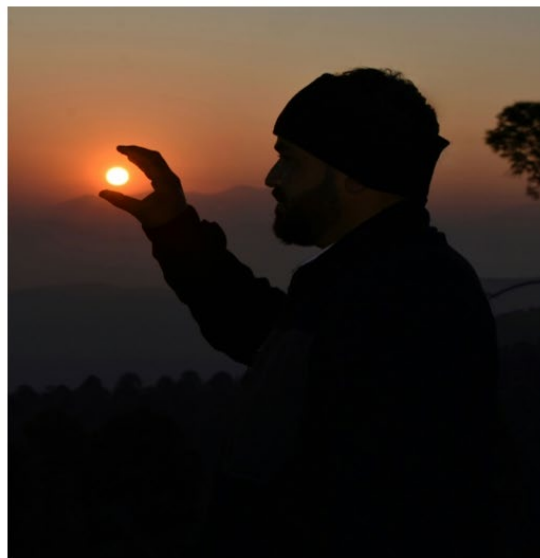
Adventure tourism - activity-based travel, is one of the newly emerging sectors of the world tourism industry and attracts travelers searching for unique experiences, thrill, exploration, and interaction with adventure nature (Alias, 2021). The unique geography, topography, rich biodiversity, and cultural diversity of the country make adventure tourism one of the key types of tourism in India, especially in the Himalayan region (Khanduri, 2020). Uttarakhand: "Land of the Gods", has emerged as a popular destination for adventure tourism, Munsiyari and Berinag have great potential for forming a nucleus of sustainable tourism development. The little Kashmir — Munsiyari, is one of the most famous place for its beauty, for trekking and nearby Panchachuli peaks (Thakur & Singh, 2018). Like Berinag is famous for views of the snow-clad mountains, it too is a gateway to various adventure exploits. Ultimately, both these locations

have immense natural beauty and potential; however, there are significant barriers to opportunity that are preventing adventure tourism from being fully realised as an industry in these locations (Thakur & Singh, 2018). Adventure tourism is an integral part of economic development of Uttarakhand, as adventure tourism generates employment, promotes local handicrafts and also generates revenue to the state, he said (Badola, Rawal, & Dhyani, 2017). With regional ecological sensitivity, sustainable adventure tourism additionally helps with conservation by stimulating eco-friendly practices. But insufficient infrastructure, environmental risks, and safety problems are the key barriers to sector expansion (Khanduri, Saklani, & Chetry, 2023). Comprehending these risks and opportunities is critical to implementation of policies aimed at long-term sustainability and net economic gain (Dikshit et al., 2020). Tucked in the stunning hills of Pithoragarh District (Uttarakhand) are two words that will take you on a natural cultural heritage journey– Munsiyari & Berinag (Joshi & Kotlia, 2015).

- **Munisyari** for trekking, mountaineering, and skiing. This is a common base for treks to Milam Glacier, Ralam Glacier, and many of the approaches to the Nanda Devi base camp (Berry, 2023). Tourism in the region is enhanced by the biodiversity in the region, including rare species of Himalayan flora and fauna (Sarkar et al., 2021).
- **Berinag** is known for its tea gardens, religion, and adventurous activities like rock climbing and camping activities. It is also the base for so many treks in the Kumaon area. Agrawal, A. (2017).

Despite both appealing to adventurous tourists, issues such as over-reliance on seasonal tourism, lack of infrastructure and erosion of natural environments are common problems to be overcome for sustainable tourism development at both destinations (Joshi et al., 2016).

1: Sun rising view in chaukori Berinag



2: Ice skiing in Munsiyari.



3: Women's of Munsyari in traditional Attire.



2. RESEARCH OBJECTIVES

This is a study to explore the opportunities and potentials as well as challenges that adventure tourism provides for the Munsiyari and Berinag. The key objectives include:

- To examine the existing adventure tourism potential in these regions.
- To identify major challenges faced by adventure tourism stakeholders.
- To assess the impact of adventure tourism on local communities and the environment.
- To provide policy recommendations for sustainable tourism development.

3. RESEARCH QUESTIONS

The study seeks to answer the following questions:

- 1) What are the key attractions and activities that contribute to adventure tourism in Munsiyari and Berinag?
- 2) What are the primary challenges hindering adventure tourism development in these areas?
- 3) How does adventure tourism impact the local economy, culture, and environment?
- 4) What strategies can be implemented to promote sustainable adventure tourism in the region?

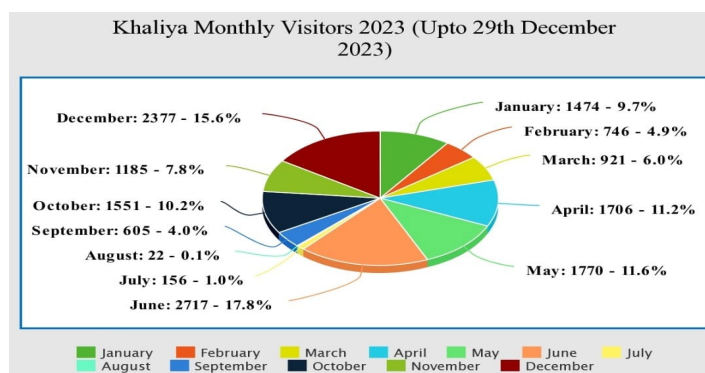
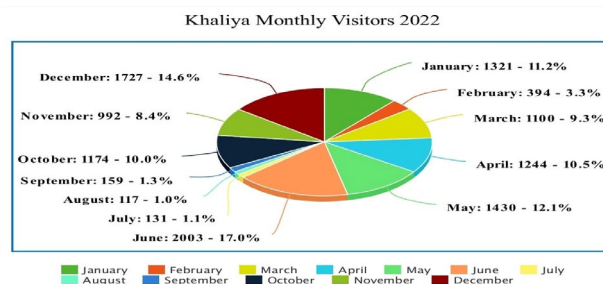
4. STUDY AREA: MUNSIYARI AND BERINAG BLOCK

4.1. GEOGRAPHIC AND CLIMATIC OVERVIEW

The big blocks are Munsiyari and Berinag in the Pithoragarh district, Uttarakhand, India. Located in Kumaon, these locations are part of the undulating mountainous land, dense biodiversity, and views of the Himalayas.

- **Munsiyari:** One among the destinations referred to as Little Kashmir of Uttarakhand, Munsiyari lies around 2,200 meters above sea level. It is the entrance to the Johar Valley and you get to experience the beautiful Panchachuli peaks. The temperate climate of the region with its cold winters and mild summers makes it one of the few suitable places in India for adventure tourism.

Yearly Number of Tourist Visiting in KhaliyaTop Munsiyari



Source Of Data Khaliya Dwar Office

- **Berinag:** Found at a height of nearly 1,860 metres, this picturesque little town is famous for its tea gardens, temples and pristine surroundings. The local climate is temperate; cool in summer, cold in winter which makes this place a holiday destination at any time of the year.

Number of Tourist in Chaukori (Berinag) Year Wise

S.N.	YEAR	TOTAL TOURIST
01	2016	5187
02	2017	7307
03	2018	7571
04	2019	6903
05	2020	COVID19
06	2021	2207
07	2022	5865
08	2023	4020

Source of Data: Kumaon Mandal Vikas Nigam
Tourist Rest House Chaukori (Berinag)

The winter season brings significant snowfall to both regions, thus increasing their potential for winter sports activities, as ski and snow trekking, within adventure tourism. Over the monsoon period, there is a lot of rain, it sometimes causes landslides and accessibility issues.

4.2. SOCIO-ECONOMIC PROFILE

Agriculture, horticulture and tourism are the mainstay of Munsiyari and Berinag economy. Indigenous individuals such as Bhotiyas provide both preservation of culture and tourism activities.

- **Agriculture and Livelihoods:** The major occupation is in farming and the crops cultivated are potatoes, barley, and millets. Apart from them, Apple and tea plantations play essential roles in the local economy.
- **Tourism and Employment:** Adventure tourism is turning into one of the main sources of revenues where local homestays, trekking method and handicraft industries are becoming ascertain out of the boosted visitors move. But that seasonal tourism makes it difficult to achieve year-round economic stability.

4.3. EXISTING TOURISM INFRASTRUCTURE

Both spots have witnessed a developing travel industry framework, yet a portion of the holes remain.

- **Road Connectivity:** This hill station in Kumaon is reachable from bigger cities like Almora, Pithoragarh, were up to road, but due to a lengthy journey, often gets disrupted by landslides. The road connection, although comparatively better, is in need of maintenance in Berinag.
- **Accommodation:** Combination of hotels, guesthouses, and homestays can be found to suit most kinds of tourists. That said, there's a shortage of luxury and high-end facilities.
- **Communications and Health Care:** Mobile networks have improved but there are still connectivity challenges in remote areas. Medical infrastructure is rudimentary, so tourists are often advised to travel to nearby towns for serious medical conditions.
- **Adventure Tourism Facilities:** There are trekking routes, camping sites and skiing zones but with poorly developed infrastructure like signboards, response to emergencies and sustainable practices of tourism.

Munsiyari and Berinag have significant prospects for adventure tourism development, backed by the district's physical, cultural and ecological uniqueness. Nonetheless, infrastructural hindrances, environmental issues and sustainable tourism practices must be tackled for the long-term transformation and development of communities.

5. RESEARCH METHODOLOGY

The methodology: the process of conducting the study, data collection, sampling, and analytical tools employed for analysing the prospect of adventure tourism, the challenges faced in the promotion of adventure tourism in Munsiyari and Berinag Block of Pithoragarh district, Uttarakhand.

5.1. RESEARCH DESIGN

The study is based on the mixed research, combine quantitative and qualitative, methodology to help understand the adventure tourism sector in the study area. The study adopts a descriptive research design in determining existing trends in tourism, and examining the spotlight challenges and opportunities for stakeholders.

5.2. DATA COLLECTION METHODS

Both primary and secondary data sources are used to cross-verify the findings of the study.

Primary Data Collection:

Perceptions, challenges, and opportunities of adventure tourism were assessed using structured surveys from tourists, local residents, tourism operators, and government officials. Tourism potential and policy constraints were gleaned qualitatively through in-depth interviews with tour operators, hoteliers, and local government authorities. Site visits were carried out to evaluate aspects related to infrastructure, accessibility, and environmental conditions that influence adventure tourism activities.

Secondary Data Collection:

Tourism Development in Uttarakhand, some Government Reports and Policy Documents It features a few research papers and case studies in relation to adventure tourism in Himalayan regions. Statistics from tourism boards, NGOs and other appropriate industry reports.

5.3. SAMPLING TECHNIQUES

A purposive sampling method was adopted to select key stakeholders with direct involvement in adventure tourism. Additionally, a random sampling approach was used for tourists and local respondents to ensure diverse perspectives.

Sample Size:

- **Tourists:** 100 respondents visiting Munsiyari and Berinag for adventure tourism activities.
- **Local Business Owners & Tour Operators:** 30 respondents.
- **Government Officials & Policy Makers:** 10 respondents.
- **Local Residents:** 50 respondents to understand socio-cultural impacts.

5.4. DATA ANALYSIS APPROACH

We conducted analysis with both qualitative and quantitative data. Survey responses were evaluated by descriptive statistics (percentages, mean, standard deviation). Statistical interpretation was done by using SPSS and Excel tools. We undertook thematic analysis of interviews and field observations. We performed a SWOT analysis to determine the strengths, weaknesses, opportunities and threats regarding adventure tourism in the region.

6. FINDINGS AND DISCUSSION

Munsiyari and Berinag Block has Some Finding Trends Under Data Analysis of Adventure Tourism Visitors. The following tables show the results along with their interpretation.

Table 1: Visitor Demographics in Munsiyari and Berinag (2023 Survey Data)

Category	Percentage (%)
Domestic Tourists	72%
International Tourists	28%
Age Group 18-30	45%
Age Group 31-45	30%
Age Group 46+	25%
Male Visitors	60%
Female Visitors	40%
First-Time Visitors	65%
Repeat Visitors	35%

A good number of tourists (72%) travelling in Munsiyari and Berinag, the hill station is majorly a destination for the domestic tourist, meaning that the Indian adventure seekers have hidden them among the top of the list of travelling attraction as it can be easily noticed. The largest part has the 18–30 age group (45%), so younger adventurers are most certainly the main target. The fact that a third (35%) are repeat visitors indicates that there is a good opportunity for continued growth if service and attractions are improved.

Table 2 Preferred Adventure Activities in Munsiyari and Berinag

Adventure Activity	Percentage (%) of Visitors Participating
Trekking	78%
Camping	62%
Skiing & Snow Activities	35%
River Rafting	28%
Wildlife Exploration	41%
Cultural Tourism	50%

Trekking (78%) is the most popular adventure activity and a key driver for tourists. Camping (62%) and cultural tourism (50%) are also extremely popular, which indicates demand for eco-tourism and heritage experiences. With more than one-third of residents saying they have skied (35%) and a little more than one-fourth saying they have river rafted (28%), it suggests that there are no attempts to navigate winter sports and cold-water activities where the same residents live.

Table 3 Perceived Challenges in Adventure Tourism Development

Challenges	Percentage (%) of Respondents Reporting
Poor Road Connectivity	69%
Limited Accommodation Options	58%
Lack of Adventure Safety Measures	47%
Environmental Degradation	55%

Seasonal Tourism Fluctuations	61%
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The most important obstacle is inadequate road connectivity (69%), underscoring the need for urgent infrastructure development. Few accommodation options (58%) indicate a gap in the market for eco resorts and homestays. The fear of getting hurt or in an adventure (47%) highlights the need for trainings, more effective equipment systems as well as emergency response systems.

Table 4: Economic Contribution of Adventure Tourism

Economic Impact Factors	Contribution to Local Economy (%)
Employment Generation	42%
Income from Local Businesses	38%
Revenue from Entry Fees & Permits	12%
Contribution to State GDP	8%

In Munsiyari and Berinag, adventure tourism is a prime source of employment (42%) for local porters, guides, and hospitality workers. 38% (Revenue from local businesses): Adventure tourism increases revenue from small-scale, private enterprise, including craftworks and the local food industry. Adventure tourism represents only a minor contribution to state GDP (8%), indicating that this is a growing, developing sector.

Youths make up the majority of visitors at the 18-30 age range making adventure experiences that focus upon youth vitally important for tourism development. These activities are the most popular which means investment on trail maintenance, camping, and eco-tourism facilities is necessary spending. But several issues like poor road connectivity, lack of accommodation and no adventure safety measures hinder sustainable tourism development. Adventure tourism is the backbone of local jobs and business growth but needs to be invest in such a way to maximise benefits to the regional economy. This analysis offers some helpful insights to policymakers, tourism planners, and entrepreneurs for expanding adventure tourism in Munsiyari and Berinag.

Different stakeholders—including local residents, tourists, government officials and tourism entrepreneurs—perceive the challenges and opportunities of adventure tourism in Munsiyari and Berinag. Some surveys and interviews with actors are summarised in this section

Table 5 Perception of Local Communities on Adventure Tourism Development

Perception Indicator	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Tourism boosts local economy	42	38	10	6	4
Tourism creates employment	48	36	8	5	3
Adventure tourism affects local culture	25	30	20	15	10
Tourism leads to environmental degradation	30	32	15	13	10
Infrastructure development is needed	60	28	7	3	2

Adventure tourism is also recognized here for its potential for sustainable economic growth, with 80% of local residents opining it is important to the local economy. Also, 84% agree that tourism generates employment thus presenting the sector as an instrument for the rural unemployment. On cultural issues, though, 55% of respondents cite the effects of tourism on local customs as a concern. Moreover, 62% feel that adventure tourism is responsible for environmental degradation, which essentially means the tourism season is demanding a seasonsented tourism. Infrastructure development was the most widely agreed upon outcome (88%), reiterating the call for investment into roads, accommodation, and connectivity to facilitate growth in tourism.

Table 6 Perceptions of Tourists on Adventure Tourism Facilities and Experience

Experience Indicator	Excellent (%)	Good (%)	Average (%)	Poor (%)	Very Poor (%)
Availability of adventure activities	50	30	10	7	3
Quality of tourism infrastructure	20	35	25	15	5
Safety and risk management	25	40	20	10	5
Hospitality and local engagement	45	40	10	3	2
Accessibility and transport	15	25	30	20	10

Notably, tourists seem satisfied that the adventure activities are available, with 80% rating them as "Good" or "Excellent," pointing to the potential of the region in adventure tourism. Only 55%, however, rate the tourism infrastructure favourably – 1 in 5 classify it as "Poor" or "Very Poor" – clearly indicating that facility investment is imperative. Respondents are largely satisfied with safety measures (65% happy), but better communications might boost confidence to attend. Satisfaction with local hospitality reflects the welcoming attitude of local residents and is rated highest (85 %). Consistent lowest ratings were for accessibility and transport, with 30% given a "Poor" or "Very Poor" score—an obvious stumbling block on the route to tourism growth. Transport is one of the critical factors in adventure tourism and making just the improvement in transport can do miracles in transforming the entire adventure tourism scenario in the region.

SWOT Analysis can assess adventure tourism potential in Munsiyari and Berinag blocks of Uttarakhand. SWOT analysis will be utilized to identify the strengths and weaknesses of the region internally and the opportunities and threats externally.

Table 7 Adventure Tourism in Munsiyari and Berinag

Strengths (S)	Weaknesses (W)
1. Scenic landscapes with Himalayan peaks, glaciers, and dense forests.	1. Limited tourism infrastructure, including roads, accommodations, and medical facilities.
2. Rich biodiversity with unique flora and fauna.	2. Poor digital connectivity and communication networks in remote areas.
3. Diverse adventure activities (trekking, skiing, mountaineering, paragliding, river rafting).	3. Seasonal dependency due to extreme weather conditions.
4. Presence of famous treks like Milam Glacier, Ralam Glacier, and Panchachuli Base Camp.	4. Lack of skilled manpower and trained guides for adventure activities.
5. Cultural and historical significance attracting heritage and eco-tourists.	5. Insufficient promotion and branding of adventure tourism potential.
6. Government interest in promoting eco-tourism and sustainable tourism initiatives.	6. Limited public transport options affecting accessibility.
Opportunities (O)	Threats (T)
1. Increasing interest in adventure tourism among domestic and international travelers.	1. Environmental degradation due to unmanaged tourism activities.

2. Potential for eco-tourism and sustainable tourism initiatives.	2. Climate change impacting snow cover and trekking routes.
3. Government schemes and incentives for tourism development.	3. Risk of natural disasters like landslides, avalanches, and flash floods.
4. Collaboration with private sector investors for infrastructure development.	4. Disturbance to local communities and cultural erosion.
5. Promotion of homestays and community-based tourism.	5. Adventure tourism risks, including accidents and rescue challenges.
6. Integration of digital marketing and social media for tourism promotion.	6. Political instability or policy changes affecting tourism regulations.

Munsiyari and Berinag are rich in natural beauty, biodiversity and adventure tourism. These are great adventure destinations with glaciers and treks running high up, not to mention skiing and paragliding. It is also of cultural and historical importance, attractive to heritage and eco-tourists. Sustainable tourism gains extra potential with government backing. Key constraints revolve around insufficient infrastructure, low road connectivity, scarcity of skilled human resources, and seasonality of tourism. Due to little promotional campaigns and a below par branding, area is visible as a niche journey tourism destination on a international stage.

Adventure tourism is experiencing an increase in demand and is thus a major opportunity. Eco-tourism and sustainable tourism practices along with the incentives from the government can be of great help to the region. Homestays and local guide training that promote community-based tourism can help residents financially. A collaborative approach with private actors paired with an investment in digital marketing can increase adventure tourism. Challenges like environmental degradation, climate change and natural disasters pose great dangers. Too much tourism might cause ecological imbalance, and if there is no waste disposal system, it will destroy the pristine nature of the region. The adventure with excitement is also a risk as it gradually causing accidents and tough time for emergency response.

The potential for adventure tourism in Munsiyari and Berinag is immense, given that it can encourage a development model that reconciles economic growth with the integrity of the ecosystem & social well-being. In this context, sustainable development has far-reaching implications as it needs to embrace an ecological, participatory, and long-term perspective (Gupta, 2022). Finally, we must develop a sustainable tourism approach in the Himalayas with very low impact on biodiversity, water resources and forest eco-systems, in keeping with the fragility of our Himalayas. Sustainable tourism strategies will also serve to regulate visitor inflows, along with waste management systems and low-impact infrastructure such as renewable energy-powered lodges, designated trekking trails, and proper waste disposal mechanisms. Of course, the tourism activities should work within Maldivian environmental regulations and guidelines to reduce the ecological footprint from the Northern Atolls, and beyond (Thakur, 2018).

Sustainable tourism practices are largely dependent on communities in areas like Munsiyari and Berinag. Models of community-based tourism (CBT) that enable locals to engage in tourism-focused enterprises such as guided treks, homestays, and handicraft sales can substantially increase socio-economic outcomes and improve cultural preservation. Employment generation and economic empowerment can happen through adventure tourism guides skill development program, hospitality workers program, and conservationist program. Furthermore, encouraging local food production, crafts and folk can bolster both the cultural characteristic of this area and visitors who desire an authentic look (Badola, 2017).

Although the development of infrastructure is needed for better accessibility, it should be done with principles of sustainability. Encouraging a low-impact tourism approach by emphasizing green infrastructure, responsible waste disposal, and sustainable transport, rather than large-scale commercial tourism projects that might upset the ecological balance in the region. Adventure tourism activities can be done at a lower carbon footprint using eco-lodges, solar-powered facilities, and rainwater harvesting systems (Khanduri, 2023). Additionally, policymakers need to put an emphasis on tourism planning based on responsibility that includes carrying capacity assessments to steer clear of over-tourism and degradation of the environment.

One more important aspect of sustainable development in adventure tourism is risk management. Tourists and local's safety are paramount considering the unstable wheather of the region and also the difficult terrains, hot you (fully) need to have well equipped Emergency Welfare systems in place with trained rescues and safety stickers. This can be achieved through partnerships between government, private sector, and non-governmental organisations (NGO) to strengthen institutional frameworks for sustainable adventure tourism (Dikshit, 2020).

So, a coordinated approach for sustainable development of adventure tourism in Munsiyari and Berinag needs adaptation considering environmental, local population, infrastructure, and polity wise resilience. Through sustainable travelling, the region can become a benchmark sustainable adventure tourism destination providing long lasting benefits to both the local population and the nature (Joshi, 2015).

7. CONCLUSION

Munsiyari and Berinag Block of Pithoragarh district have special opportunities and challenges in adventure tourism related to the sustainable development of economy. Boasting vast natural landscapes, biodiverse ecosystems and cultural uniqueness, the region poses extreme potentials for trekking, mountaineering, and skiing. It can become one of the topmost adventure tourism destinations in Uttarakhand with the right infrastructure, community and policy support. Tourism has great potential to bring a sense of hope; however, the lack of road and environmental access, trained personnel, and season constrains this very sustainable trait of tourism. The importance of a balanced approach to development is also emphasized by safety fears, regulatory loopholes and the need for sustainable tourism practices. Tackling these challenges through sustainable planning, green practices, and stakeholder cooperation will be essential in making sure that the benefits of tourism are long lasting and mutually beneficial to both tourists and locals. Integration of tourism with local economic development while protecting a fragile, unique and irreplaceable Himalayan ecosystem is the message of this study. To overcome the challenges, a strong foundation of infrastructure, improved safety measures, and greater emphasis on community-based tourism will be paramount. Further studies are required to evaluate the socio-economic benefits from adventure tourism and investigate new models of tourism growth that may support sustainability of the region.

CONFLICT OF INTERESTS

None.

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None.

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